

SYSTEMATIC LIST OF THE SPECIES.

IN preparing the present volume, my work has been greatly facilitated by the loan of many specimens from Lord Rothschild's magnificent series of New Guinea birds in the Tring Museum, and both to him and to Dr. Ernst Hartert I would return my sincere thanks for their assistance. Dr. Hartert has also kindly looked over the proofs of this volume and a few points in which we differed in our conclusions have since been fully discussed and revised, so that in almost every instance we are now in agreement.

The titles of the principal works quoted throughout this volume have been abbreviated in the following manner:—

The 'Catalogue of the Birds in the British Museum' is quoted as "Cat."

Count T. Salvadori's standard work 'Ornitologia della Papuasias e delle Molucche' is quoted throughout as "Salvad. O. P."

A paper on "Birds from South-western and Southern New Guinea" in 'Nova Guinea,' ix. Zoologie, Livr. i. 1909, by Dr. E. D. van Oort, is quoted as "van Oort."

Other papers by Dr. E. D. van Oort in 'Notes from the Leyden Museum' are quoted as "van Oort, Notes."

Papers by Lord Rothschild and Dr. E. Hartert in the 'Novitates Zoologicae' are quoted as "Roths. & Hartert, N. Z."

"Notes on Birds collected by the B.O.U. Expedition to Dutch New Guinea," by W. R. Ogilvie-Grant in A. F. R. Wollaston's 'Pygmies & Papuans,' Appendix A, pp. 263-302 (1912), are quoted as "Ogilvie-Grant, P. & P."

This article was reprinted in 'The Ibis,' 1913.

Species marked with an asterisk (*) were not procured by the B. O. U. or Wollaston Expeditions, but were met with by Mr. A. S. Meek and recorded by Lord Rothschild and Dr. Hartert in the 'Novitates Zoologicae,' or were secured by Dr. J. W. R. Koch and Dr. H. A. Lorentz, and included by Dr. van Oort in his paper in 'Nova Guinea,' vol. ix. and in 'Notes from the Leyden Museum,' vols. xxxii.-xxxiv.

Family CORVIDÆ.

Corvus orru.

Corvus orru Bonap.; Sharpe, Cat. iii. p. 44 (1877); van Oort, p. 99 (1909).

a-c. ♂. Mouth of the Mimika River, 30th Nov. & 10th Dec. 1910. [Nos. 20, 91, 95, *C. H. B. G.*]

d. ♀ pull. Launch Camp, Setakwa River, 13th March, 1913. [*C. B. K.*]

A nestling, no doubt of this species, has the basal parts of contour feathers on the back greyish-brown, but paler and more grey on the mantle. The adult has the bases of the feathers white.

This handsome Raven was observed on the coast, where one or two pairs were seen. Mr. Claude Grant says that its flight and general habits are very similar to those of the Carrion-Crow of Europe.

Gymnocorax senex.

Gymnocorax senex (Lesson); Sharpe, Cat. iii. p. 50 (1877); van Oort, p. 99 (1909); Ogilvie-Grant, P. & P. p. 267 (1912); id. Ibis, 1913, p. 80; Roths. & Hartert, N. Z. xx. p. 520 (1913).

a, b. ♂ imm. Lower Mimika River, 21st Feb. 1910. [*W. G.* & No. 1082, *G. C. S.*]

c-f. ♂ et ♂ ♀ imm. Parimau, Mimika River, 4th & 21st Sept. 1910. [Nos. 129, 130, 231, 232, *C. H. B. G.*]

g. ♂. White Water Camp, Kaparé River, 20th Oct. 1910. [No. 350, *C. H. B. G.*]

h. ♂ imm. Wataikwa River, 30th Oct. 1910. [No. 1300, *G. C. S.*]

i. ♂. Launch Camp, Setakwa River, 18th Oct. 1912.
[C. B. K.]

k. ♀. Canoe Camp, Setakwa River, 19th Dec. 1912.
[C. B. K.]

l. ♀. Camp 3, Utakwa River, 2500 ft., 9th Jan. 1913.
[C. B. K.]

Adult. Iris blue, orbits flesh-colour or bluish-slate and fleshy; bill pale slate or bluish-slate, tip blackish, tip and base of lower mandible flesh-colour; feet fleshy white, or whitish-flesh and black.

Immature. Iris blue or pale blue, orbits and face pink, rose-pink or fleshy; bill pearly flesh-colour, very pale flesh or pink at the base and greyish at the tip, or upper mandible bluish, lower dull pink; feet whitish-horn-colour, flesh-colour, or flesh-colour marked with dark horn or black.

This series of skins shows the various changes of plumage in the Bare-faced Crow, which is common on the Mimika River and distributed over New Guinea generally.

It is a bird of unprepossessing appearance. The adult is brownish-black with a slight purplish or bluish gloss on the wings, but is generally in worn and more or less shabby plumage. Even when freshly moulted it is an unattractive-looking bird, its naked pink face, pale watery-blue eyes, slate-coloured bill, and livid feet adding to its dissipated appearance. Young birds in their first year's plumage are even plainer than their parents, being dull drab-brown, inclining to brownish-white or white on the head and neck. Mr. Walter Goodfellow says that they have a weak uncrow-like call, pitched in a high key, and that their flight is feeble and seldom sustained.

"This Crow was commonly observed throughout the country traversed, and was usually seen in parties of six or eight. Its food appears to consist principally of wild fruit and berries, and it was often seen in the sandy and shingly beds of the rivers, where it was presumably picking up gravel for digestive purposes."—C. H. B. G.

Family PARADISEIDÆ.

Phonygammus keraudreni.

Phonygammus keraudrenii Less. & Garn. in Férussac, Bull. Sci. Nat. viii. p. 110 (1826).

Phonygama keraudrenii Less. & Garn. Voy. 'Coquille,' Ois. i, p. 636, pl. xiii. (1826). [Dorei].

Phonygammus keraudrenii van Oort, p. 104 (1909); Roths. & Hartert, N. Z. xx. p. 520 (1913).

Phonygama jamesi Sharpe, Cat. iii. p. 181 (1877) [Aleya, S.E. New Guinea near Yule Island].

a. ♀ imm. Upper Mimika River, 6th Feb. 1910. [No. 1034, *G. C. S.*]

b-h. ♂ ♀ et ♂ imm. Parimau, Mimika River, 6th Sept.-29th Dec. 1910. [Nos. 142, 175, 177, 709, 866, *C. H. B. G.*; & 1481, 1482, *G. C. S.*]

i-l. ♂ ♀. Wataikwa River, Aug.-Dec. 1910. [*W. G.*; *C. H. B. G.*; & No. 1455, *G. C. S.*]

m-q. ♂ ♀. Canoe Camp, Setakwa River, 26th Oct. 1912-2nd Jan. 1913. [*C. B. K.*]

r. ♂. Launch Camp, Setakwa River, Oct. 1912. [*C. B. K.*]

s. ♂. Camp 3, Utakwa River, 2500 ft., 14th Jan. 1913 [*C. B. K.*]

Adult male. Iris orange or ruby-colour; bill and feet black.

Adult female and immature. Iris deep yellow or orange-yellow; bill and feet black.

In my notes on the B. O. U. Collection published in Appendix A to Mr. Wollaston's 'Pygmies and Papuans,' I rightly referred the specimens from Southern Dutch New Guinea to *P. jamesi* Sharpe.

Sharpe, in his 'Monograph of the Paradiseidæ,' pt. iv. (1895), in writing of *P. keraudreni* correctly refers *P. jamesi* to the synonymy of that species: subsequently, however, in pt. vii. (1897), he changed his mind and upheld *P. jamesi* as a distinct species. I have carefully compared the large series in the British Museum now available for examination and

cannot find any specific or subspecific difference between typical examples of *P. keraudreni* from Dorei, Geelvink Bay, and those from the Aru Islands, Southern Dutch New Guinea, and South-eastern New Guinea, including the type specimen of *P. jamesi*, from Aleya. These all inhabit the lower grounds of the coastal region ranging upwards to about 2000 ft., and are quite distinct from *P. purpureo-violacea* Meyer [cf. Sharpe, Monogr. pt. iii. (1894)], which inhabits the Owen Stanley Range and its outlying spurs at elevations of about 4000–6000 ft., and possibly ranges upwards. It must, however, be mentioned that in the Tring Museum there is a specimen of *P. keraudreni* said to have been procured by Meek at 6000 ft. If no mistake has been made, it is evident that the coast-form occasionally straggles upwards, but this specimen in the Tring Museum is the only exception I have met with. *P. jamesi* was wrongly united with *P. purpureo-violacea* by Lord Rothschild (as he now admits) both in 'Das Tierreich, Paradiseidæ,' p. 47 (1898), and in 'The Ibis,' 1911, p. 367.

The highland-form, *P. purpureo-violacea*, has the head and neck steel-green, and the rest of the upperparts, including the *rump* and *upper tail-coverts*, shining violet-purple, the two colours being in marked contrast to one another: *P. keraudreni* has the head and neck steel-blue or greenish like the upperparts, including the *rump* and *upper tail-coverts*, and sometimes inclines to purplish on the secondaries, but there is no strongly marked contrast between the colouring of these parts as in *P. purpureo-violacea*. The feathers of the head and neck in the adult are of a more steel-blue colour when freshly moulted, becoming greenish with wear, but there is also some individual variation. *P. purpureo-violacea*, as pointed out by Messrs. Rothschild and Hartert (though they wrongly refer to it as *P. jamesi*), has the neck-hackles longer and wider than in *P. keraudreni*.

The wing-measurement in males varies from 152–165 mm.; in females from 148–161 mm.

In *P. purpureo-violacea* males vary from 160–170 mm.; females from 153–164 mm.

I can recognize four species :—

1. *P. keraudreni* Less. & Garn., from the low ground of North-western and Southern New Guinea and from the Aru Islands.
2. *P. purpureo-violacea* Meyer, from the Owen Stanley Range, 4000–6000 ft.
3. *P. hunsteini* Sharpe, from Fergusson & Normanby Islands.
4. *P. gouldi* G. R. Gray, from North-east Australia.

An egg of this species was taken by Mr. W. Goodfellow at Wanumbai, Aru Islands, on the 15th December, 1906.

The egg figured as that of *P. jamesi* by Dr. Hartert, N. Z. xvii. p. 490, pl. x. fig. 10 (1910), is referable to *P. purpureo-violacea* and not the present species. It was taken by A. S. Anthony on the Owen Stanley Mountains at an elevation of 6000 ft., where, as already shown, the coastal form *P. keraudreni* does not occur (except, possibly, as an accidental straggler), and only *P. purpureo-violacea* is found [*cf.* also *P. k. jamesi* Roths. & Hartert, N. Z. x. p. 87 (1903)].

The egg of *P. keraudreni* may be described as follows:—

Of an oval shape, somewhat pointed at one end and slightly glossy. The ground-colour is pale pinkish with oblong spots, dashes and smears of reddish-brown and greyish-violet, mostly pointing downwards and arranged round the pole at the larger end. It measures 32 by 23 mm.

“Kéraudren’s Manucode was not uncommon through the middle belt of the country, but was not observed either in the mountains or on the coast, though of course it may have been present there in lesser numbers.”—*C. H. B. G.*

Manucodia atra.

Manucodia atra (Lesson) ; Sharpe, Cat. iii. p. 183 (1877) ; Roths. & Hartert, N. Z. xx. p. 521 (1913).

Manucodia ater van Oort, p. 104 (1909).

Manucodia altera Roths. & Hartert ; Ogilvie-Grant, P. & P. p. 273 (1912) ; *id.* Ibis, 1913, p. 86.

a, b. ♂ ♀. Mouth of the Mimika River, 10th & 12th Dec. 1910. [Nos. 96, 141, *C. H. B. G.*]

c. ♀. Wakatimi, Mimika River, 8th March, 1911. [No. 1127, *C. H. B. G.*]

d. ♀. Upper Mimika, 18th Feb. 1910. [No. 1071, *G. C. S.*]

e-g. ♂. Parimàu, Mimika River, 10th July, 6th Sept., & 30th Dec. 1910. [Nos. 1475, *G. C. S.*; 141, 879, *C. H. B. G.*]

h-m. ♂ ♀ et ♂ imm. Wataikwa River, 27th Sept.-20th Oct. 1910. [Nos. 1267, 1276, 1306, 1380, 1404, *G. C. S.*]

n. ♂ imm. Iwaka River, 4th Feb. 1911. [No. 986, *C. H. B. G.*]

o-g. ♂. Launch Camp, Setakwa River, 14th Oct. 1912 & 13th March 1913. [*C. B. K.*]

r, s. ♂. Canoe Camp, Setakwa River, 24th Oct. & 18th Nov. 1912. [*C. B. K.*]

t. ♀. Camp 3, Utakwa River, 2500 ft., 28th Nov. 1912. [*C. B. K.*]

Adult male. Iris orange or orange-red; bill black; feet dusky black.

Immature male. Iris deep yellow or deep dull brownish-orange; feet black.

Adult female. Iris yellow or yellow-ochre; bill and feet black.

In my preliminary report on the B.O.U. Expedition I recorded the specimens listed above as *M. altera* Roths. & Hartert, a slightly larger race originally described from South-eastern New Guinea.

The typical locality of *M. atra* is Arfak, and our specimens from Dorei have a wing-measurement of 184-186 mm.; to this race must be referred birds from Humboldt Bay, 174-177; Misol, 180-181; Waigiu, 180; and the present series from South-west New Guinea, of which the males vary from 181-189 and the females 171-172.

Birds from the Aru Islands and South-eastern New Guinea

are rather larger: males 191–198 mm.; females 181–184. It will thus be seen that the difference is trifling.

The males are brighter below than the females.

"I was unable to distinguish this *Manucodia* in its natural habitat from the two allied species."—*C. H. B. G.*

***Manucodia jobiensis*.**

Manucodia jobiensis Salvad.; Sharpe, Cat. iii. p. 184 (1877); Ogilvie-Grant, P. & P. p. 273 (1912); id. Ibis, 1913, p. 86; Roths. N. Z. xx. p. 520 (1913).

a. ♂. Upper Mimika River, 20th Feb. 1910. [No. 1078, *C. H. B. G.*]

b-m. ♂ ♀ et ♂ imm. Parimau, Mimika River, 31st Aug.–28th Dec. 1910. [Nos. 63, 164, 223, 271, 290, 611, 700, 789, 794, 795, 860, *C. H. B. G.*]

n. ♀. White Water Camp, Kaparé River, 26th Oct. 1910. [No. 374, *C. H. B. G.*]

o. ♂. Launch Camp, Setakwa River, 3rd Oct. 1912. [*C. B. K.*]

p, q. ♀. Canoe Camp, Setakwa River, 17th & 25th Nov. 1912. [*C. B. K.*]

Adult male. Iris fiery red; bill and feet black.

Adult female. Iris yellow; bill and feet black.

Immature. Similar to the female, but gape greenish.

This species is new to the British Museum. Though in general appearance much like the other curly-headed species associating with it, it may be distinguished from its nearest ally, *M. chalybata*, by having the short curly feathers on the chest and breast dark steel-blue, instead of glittering golden-green; and the feathers of the mantle violet with a very narrow submarginal line, instead of velvet-black changing to purple, edged on either side with steel-blue. When turned away from the light the mantle in *M. chalybata* appears to be dead velvety black.

Both *M. jobiensis* and *M. chalybata* are easily distinguished from the larger *M. atra* by having the feathers of the throat crinkled, whereas in the last named they are nearly normal

in shape, being short and rounded at the tip. As I pointed out in my preliminary notes, *M. chalybata* (named *M. orientalis*, which is a synonym) and *M. jobiensis* are distinct species found inhabiting the same localities [*cf.* Roths. N. Z. xx. p. 520, note].

Two eggs were obtained at Parimau on the 28th of December, 1910, and the female parent (No. 860) secured. The eggs are of a rather short oval shape, slightly pointed towards one end and almost devoid of gloss. The ground-colour is pale pinkish, spotted with small dark vandyke-brown dots and larger oblong lavender-grey spots, chiefly arranged in a wreath round the pole of the larger end and thinly distributed elsewhere over the shell. They measure respectively 32×24.5 , 31.5×24 mm.

These two eggs were at first referred by Mr. Claude Grant to *M. altera* (P. & P. p. 274), but a subsequent examination of the parent bird proved them to be eggs of *M. jobiensis*.

"This was the commonest of the Manucodes around Parimau, where it might be seen everywhere throughout the jungle. A long-drawn moaning note was attributed to this species, both by myself and by the two Dyak collectors. The nest, containing the eggs described above, was suspended between two horizontal branches about 8 ft. from the ground. It was deeply cup-shaped and composed of roots, creepers, and leaves. The female parent (No. 860) was very wild, and it required much patience to secure her."—*C. H. B. G.*

Manucodia chalybata.

Manucodia chalybata (Penn.) ; Roths. & Hartert, N. Z. xx. p. 520 (1913).

Manucodia chalybata orientalis Salvad. ; van Oort, p. 103 (1909) ; Roths. & Hartert, N. Z. xx. p. 520 (1913).

Manucodia orientalis Ogilvie-Grant, P. & P. p. 273 (1912) ; *id.* Ibis, 1913, p. 86.

a-d. ♂ ♀ . Iwaka River, 24th Jan.–12th Feb. 1911. [Nos. 910, 980, 981, 4032, *C. H. B. G.*]

e-m. ♂ ♀ et ♂ imm. Camp 3, Utakwa River, 2500 ft., 20th Nov. 1912–13th Jan. 1913. [*C. B. K.*]

Iris greenish-golden ; bill and feet black.

M. chalybata orientalis cannot in my opinion be maintained, the differences between birds from Western New Guinea and those from South-east New Guinea being purely individual.

"This Manucode was only observed in the mountains, but it has the same habits and appearance as the other species."—*C. H. B. G.*

Ptilorhis magnificus.

Ptilorhis magnifica (Vieill.) ; Sharpe, Cat. iii. p. 157 (1877) ; Ogilvie-Grant, P. & P. p. 269 (1912) ; id. Ibis, 1913, p. 82.

Craspedophora magnifica Salvad. O. P. ii. p. 554 (1881).

Ptiloris magnificus van Oort, p. 101 (1909) ; Roths. & Hartert, N. Z. xx. p. 522 (1913).

a-c. ♀ et ♂ imm. Mouth of the Mimika River, 3rd–15th Dec. 1910. [Nos. 44, 71, 147, *C. H. B. G.*]

d. ♀. Upper Mimika River, 3rd April, 1910. [No. 1122, *G. C. S.*]

e-n. ♂ ♀ et ♂ imm. Parimau, Mimika River, 1st Aug.–17th Dec. 1910. [Nos. 35, 181, 247, 297, 530, 708, 752, *C. H. B. G.* ; 1492, *G. C. S.*]

o, p. ♂ ♀. White Water Camp, Kaparé River, 16th & 17th Oct. 1910. [Nos. 316, 326, *C. H. B. G.*]

q-y. ♂ ♀ et ♂ imm. Wataikwa River, 21st Sept.–31st Oct. 1910. [Nos. 1211, 1238, 1314, 1321, 1381, 1414, 1443, 1444, 1460, *G. C. S.*]

z-c'. ♂ et ♂ ♀ imm. Iwaka River, 28th Jan.–11th Feb. 1911. [Nos. 950, 1012, 1019, 1020, *C. H. B. G.*]

d'-f'. ♂ ♀. Launch Camp, Setakwa River, 6th Nov. 1912 and 6th & 9th March, 1913. [*C. B. K.*]

g'-t'. ♂ ♀ et ♂ imm. Canoe Camp, Setakwa River, 26th Oct.–12th Dec. 1912. [*C. B. K.*]

u'-y'. ♂ et ♀ imm. Camp 3, Utakwa River, 2500 ft., 7th Dec. 1912–12th Jan. 1913. [*C. B. K.*]

Adult male. Iris dark brown ; bill black, gape grass-green ; feet very dark slate-colour or black.

Immature male. Iris dark brown, raw-umber or raw-sienna; bill black or sooty, gape green; feet slate-colour or bluish-ash.

Adult female. Iris dark brown or greyish-brown; bill and feet as in the immature male.

A large series of this Paradise-bird was collected in all stages of plumage, ranging from the quite young to the fully adult.

A quite young female still retains the nestling-plumage on the underparts; the feathers are much softer and more downy than those of the subsequent plumage, and the dark bars on the breast and belly are sooty-brown and much wider apart; the upperparts including the crown are paler and more rufous.

"The Rifle-bird was observed throughout all the country traversed, but was perhaps most plentiful inland and along the mountain-slopes. Adult males are much more wary than females or immature birds, and the jungles resound with their clear whistle, consisting of two long-drawn notes, one ascending, the other descending. They will often call during the night if disturbed by the falling of a tree or other cause."—*C. H. B. G.*

Seleucides nigricans.

Seleucides niger Sharpe (nec Shaw), Cat. iii. p. 159 (1877); Ogilvie-Grant, P. & P. p. 269 (1912); id. Ibis, 1913, p. 83.

Seleucides nigricans (Shaw); Salvad. O. P. ii. p. 561 (1881).

Seleucides ignota Forst.; van Oort, p. 101 (1909); Roths. & Hartert, N. Z. xx. p. 522 (1913).

a. ♂ imm. Mimika River, 30th April, 1910. [No. 1140, *G. C. S.*]

b-p. ♂ ♀ et ♂ ♀ imm. Wakatimi, Mimika River, 1st Jan.–30th March, 1911. [Nos. 213, 217, 218, 220, 221, 1046, 1053, 1079, 1089, 1109, 1125, 1132, 1288, 1289, *C. H. B. G.*]

g, r. ♀. Parimàu, Mimika River, 6th & 7th Sept. 1910.
[Nos. 147, 154, *C. H. B. G.*]

s. ♂ imm. Tuaba River, 19th May, 1910. [No. 1160,
G. C. S.]

t-d'. ♀ et ♂ imm. Launch Camp, Setakwa River, 4th
Oct.-7th Nov. 1912. [*C. B. K.*]

e'-n'. ♂ et ♂ imm. Canoe Camp, Setakwa River, 29th
Oct. 1912-5th Jan. 1913. [*C. B. K.*]

Adult male. Iris cerise; bare skin behind the eyes bronze-black; bill ivory-black, gape green; feet fleshy-yellow.

Immature male. Iris rich blood-orange, pale yellow, or pale greenish-yellow; bill ivory black, gape green; feet pale pink, pink, or pinkish-yellow.

Adult female. Iris blood-orange; bill black, gape greenish; feet reddish-flesh-colour.

Dr. van Oort and Messrs. Rothschild and Hartert have revived the name *Paradisea ignota* for this Twelve-wire Bird-of-Paradise, but I entirely agree with Sharpe, that Forster did not use the name in a binomial sense.

The proper name for this species is therefore *Paradisea nigricans* Shaw; not the *P. nigra* Shaw, which is evidently a species of *Falcinellus*, probably *F. striatus*, but the specimen is not among the birds of the Pennant Collection, recently presented to the British Museum by Lord Denbigh.

Among the large series collected all stages of plumage are represented, from the young bird with a bill of 1·8 inches to the adult. Perhaps the most interesting are the males in nearly fully adult plumage, but with the quills of the wings and tail rufous more or less suffused with black or black and rufous, the inner web being often black while the outer is rufous or partially rufous. These specimens, *a'*, *b'*, *m'*, and *n'*, from the Setakwa River, and No. 221 from the Mimika River, seem to afford a strong argument in favour of a change in the colour of the plumage without a moult. The feathers in question are, however, perhaps the first to be acquired at the beginning of the moult when the change is imminent and foreshadow coming events.

“The Twelve-wired Bird-of-Paradise was only observed

on the flats, being especially plentiful near the coast; but old males were both wary and scarce. As a rule it frequents the taller trees, often in parties of three or four. The call of the adult male is a long drawn *ooū* ending in two sharp and loud notes, *wah wah*. The flight is swift and graceful, the wings producing a curious 'wish wish' like those of the Rifle-bird."—*C. H. B. G.*

Falcinellus striatus atratus.

Falcinellus striatus atratus Roths. & Hartert, N. Z. xviii. p. 160 (1911) [Mt. Goliath, 5000 ft.]; xx. p. 522 (1913).

a. ♀. Camp 6 B, Utakwa River, 4200 ft., 3rd Feb. 1913. [*C. B. K.*]

b, c. ♀. Camp 6 c, Utakwa River, 5500 ft., 21st Feb. 1913. [*C. B. K.*]

d, e. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 4th Feb. 1913. [*C. B. K.*]

This handsome Sickle-billed Bird-of-Paradise is new to the British Museum Collection. It is stated in the original description that in the present form the tips of the lower ornamental side-plumes are steel-blue instead of more or less bronzy green, but I do not find in our male that there is any appreciable difference in this respect, the underparts, however, are deep black with a dark green gloss instead of sooty-brown with a faint purplish gloss.

The female seems to differ slightly from the female of *F. striatus* not only in its more olive upperparts, but in having the black on the throat less extended over the fore-neck.

In both male and female the tail seems to be shorter than in *F. striatus*—in the female, at least, this is certainly the case.

Adult male. Total length ?; culmen, from anterior end of nasal opening, 61 mm.; wing 198; tail, in moult, 444; tarsus 61.

Adult female. Total length about 480 mm.; culmen 61–63; wing 161–167; tail 260–278; tarsus 49–50.

In the male of *F. striatus* the tail measures 798 mm.; in the female, 290.

The colours of the soft-parts have, unfortunately, not been recorded.

Astrapia splendidissima.

Astrapia splendidissima Roths. N. Z. ii. p. 59, pl. v. (1895); Roths. & Hartert, N. Z. xx. p. 521 (1913).

a. ♂ imm. Camp 6 B, Utakwa River, 4200 ft., 24th Jan. 1913. [*C. B. K.*]

b. ♂ imm. Camp 6 c, Utakwa River, 5500 ft., 23rd Feb. 1913. [*C. B. K.*]

c-e. ♂ ♀ et ♂ imm. Camp 9, Utakwa River, 5500 ft., 26th Jan.-2nd Feb. 1913. [*C. B. K.*]

All the specimens of this magnificent Bird-of-Paradise were procured by Chunggat and Jaggat, the Dyak collectors, and unfortunately no record of the colours of the soft parts has been kept. The male of this species has been well figured by Keulemans in the plate referred to above. Our freshly killed male specimen differs from the native-made skins, from which the species was described, in the points mentioned by Messrs. Rothschild and Hartert. I entirely agree with them that the differences in the metallic colouring are no doubt caused by the mode of preparation.

Paradisæa apoda novæguineæ.

Paradisæa novæguineæ D'Alb. & Salvad.; Salvad. O. P. ii. p. 609 (1881); Ogilvie-Grant, P. & P. p. 267 (1912); id. Ibis, 1913, p. 81.

Paradisæa apoda novæ-guineæ van Oort, p. 103 (1909); Roths. & Hartert, N. Z. xx. p. 521 (1913).

a-f. ♀ et ♂ imm. Upper Mimika River, 4th Feb.-Aug. 1910. [Nos. 1025, 1053, 1090, *G. C. S. & W. G.*].

g-z. ♂ ♀ et ♂ imm. Parimau, Mimika River, 2nd Sept. 1910-11th Jan. 1911. [Nos. 102, 138, 161, 193, 201, 210, 211, 273, 276, 325, 527, 561, 713, 754, 885, 888, 894, *C. H. B. G.*; 1213, 1505, 1515, *G. C. S.*]

a', b'. ♀. White Water Camp, Kaparé River, 17th & 26th Oct. 1910. [Nos. 325, 328, *C. H. B. G.*]

c'-r'. ♂ ♀ et ♂ imm. Wataika River, 28th July, 1910–4th Feb. 1911. [Nos. 1264, 1285, 1286, 1301, 1302, 1307, 1326, 1394, *G. C. S. & W. G.*]

s'. ♂ imm. Iwaka River, 17th Jan. 1911. [No. 895, *C. H. B. G.*]

t'-i². ♂ ♀ et ♂ imm. Canoe Camp, 24th Oct.–30th Dec. 1912. [*C. B. K.*]

k², l². ♂ imm. Camp 3, Utakwa River, 2500 ft., Jan. & 25th Feb. 1913. [*C. B. K.*]

Adult male. Iris yellow, greenish-yellow, or greenish-golden; bill bluish-grey, light slate-blue, or bluish-ash; feet ash-pink, grey tinged with rusty-pink, or purplish.

Immature male. Iris greenish-yellow; bill pale blue or bright slate-blue; feet ash tinged with brownish-pink, or pale salmon-brown tinged with bluish.

Young male. Iris yellow or greenish-yellow; bill bluish-grey, pale blue, or bluish-ash; feet pinkish-ash, purplish-brown, vinous, or light slate-blue.

Adult female. Iris yellow or greenish-yellow; bill pale blue or bluish-grey; feet pinkish slate-colour, ash-colour tinged with cinnamon or brownish-pink.

Adult males in full plumage were obtained between the 28th July and 7th January. The moult evidently extends over a considerable period, for birds with moulting heads and half-grown side-plumes were killed in September, October, and November. It would seem that in a wild state the male takes at least five years to assume the adult plumage :—

1st plumage. Brown, like that of the female; no trace of metallic plumage on the head; middle pair of tail-feathers not longer than the outer pairs.

2nd plumage. Similar to the above.

3rd plumage. Head and neck as in the adult, but the chest scarcely darker than in birds in the first and second year's plumages; middle tail-feathers similarly coloured, but half as long again as the outer pairs, webbed on both sides to the

tip, but with the vanes much narrower along the middle third.

4th plumage. As in the third plumage, but the chest is very deep chocolate-brown glossed with purplish and the lengthened middle pair of tail-feathers are replaced by wires, as in the adult; there is still no trace of the ornamental side-plumes.

5th plumage. As in the fourth plumage, but with long ornamental side-plumes. The bird is now in adult plumage, but the side-plumes are not so long or so fully developed as in the sixth and subsequent years.

As might be expected, these changes are sometimes retarded in captivity when the bird is not taking exercise or receiving its proper diet.

"The New Guinea Bird-of-Paradise was only observed in what may be termed the middle belt, that is to say, it was not seen near the coast and only extended on to the very first foothills of the mountain-range. Its call and habits appear to be very similar to those of *P. apoda*; and the adult males were seen disporting themselves in the taller trees, no fewer than eight being observed on one tree by one of the men."—*C. H. B. G.*

****Paradisæa minor*.**

Paradisæa minor Shaw; Ogilvie-Grant, *Ibis*, 1905, pp. 429-440, pl. viii., text-figs. 22-26; van Oort, p. 103 (1909).

Females of the Lesser Bird-of-Paradise are recorded from Etna Bay. The Pygmies often brought plumes of this species to Parimau and traded them with the natives, but the species was not found on the Mimika, the Charles Louis Mountains probably forming its southern boundary.

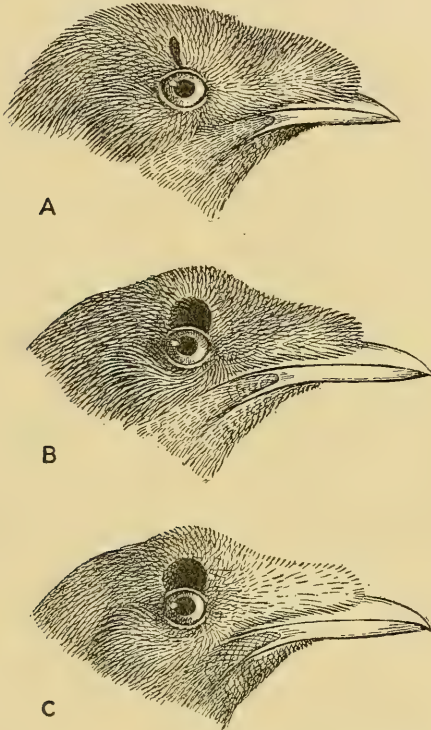
+ *Cicinnurus regius claudii*, subsp. n. (Text-figs. 1 & 2.)

Cicinnurus regius van Oort (nec Linn.), p. 102 (1909); Ogilvie-Grant, *P. & P.* p. 268 (1912); id. *Ibis*, 1913, p. 81; Roths. & Hartert, *N. Z.* xx. p. 521 (1913).

Adult male. Differs from *C. r. coccineifrons* Roths. in

having the black supraocular spot rounded as in *C. regius* Linn., not linear; the feathers on the forehead are shorter and not so dense, and do not approach so near the end of the bill as in *C. r. coccineifrons*. The scarlet colour of the

Text-fig. 1.



- A. *Cicinnurus regius coccineifrons* Roths.
 B. *Cicinnurus r. claudii*, subsp. n.
 C. *Cicinnurus regius* (Linn.).

forehead separates this form at a glance from the orange-red fronted *C. regius*. (See text-fig. 1.)

Male and female: Wing to the end of the primaries 100 mm.

a-g. ♂ et ♂ ♀ imm. Wakatimi, 22nd Nov. 1910—
 SER. X.—JUB.-SUPPL. 2.

10th March, 1911. [Nos. 1539, *G. C. S.*; 173, 189, 212, 1123, 1129, 1140, *C. H. B. G.*]

h-n. ♂ et ♂ imm. Upper Mimika River, 4th–22nd Feb., May, & Aug. 1910. [*W. G.* & Nos. 1024, 1033, 1047, 1083, *G. C. S.*]

o-u'. ♂ ♀ et ♂ ♀ imm. Parimàu, Mimika River, 30th Aug. 1910–21st Feb. 1911. [Nos. 46, 47, 92, 93, 119, 166, *248, 252, 277, 488, 491, 499, *516, 522, 540, 563, 656, 665, 703, 742, 743, 756, 760, 768, 787, 796, 805, 829, 847, 1045, *C. H. B. G.*]

v'. ♂. White Water Camp, Kaparé River, 29th Oct. 1910. [No. 391, *C. H. B. G.*]

w'-z'. ♂ ♀. Wataikwa River, 24th Sept. 1910–Feb. 1911. [Nos. 1239, 1252, 1413, 1414, *G. C. S.*]

a²-f². ♂ ♀ et ♂ imm. Launch Camp, Setakwa River, 4th Oct. 1912–22nd March, 1913. [*C. B. K.*]

g²-v². ♂ ♀ et ♂ ♀ imm. Canoe Camp, Setakwa River, 28th Oct. 1912–27th March, 1913. [*C. B. K.*]

Adult male. Iris brown or greyish-brown; bill yellow or bright ochre, inside of mouth grass-green; feet bright cobalt.

Immature male. Like the adult, but the colour of the feet is less bright.

Young male. Iris dark brown; bill dark brown; feet dull cobalt.

Adult female. Iris brown; bill pale yellowish-brown; feet medium Prussian blue.

Young males and females in their first year's plumage resemble the adult female, but have the bill dark brown, instead of yellowish horn-colour, and the wing-coverts and quills, except the outermost primaries, margined with reddish-chestnut on the outer web.

In the second year's plumage the young male and female resemble the adult female.

In the third year's plumage the young male assumes a mixed plumage, some or most of the feathers of the head, back, etc., being scarlet, like those of the adult male, others brown,

* The types of the subspecies from Parimàu, Mimika River, are Nos. 516 and 248.

tipped with orange or orange-scarlet ; the side-ornaments are partially developed, but the lengthened feathers are mixed or barred with rufous-buff, only the longest being tipped with golden-green. The new outer tail-feathers are broader, shorter, and edged externally with vermilion, while the middle pair, though much lengthened, are not so long as in the adult, the basal part being narrowly varied on both webs with brown and rufous, and the terminal curl dull brown and not so tightly twisted.

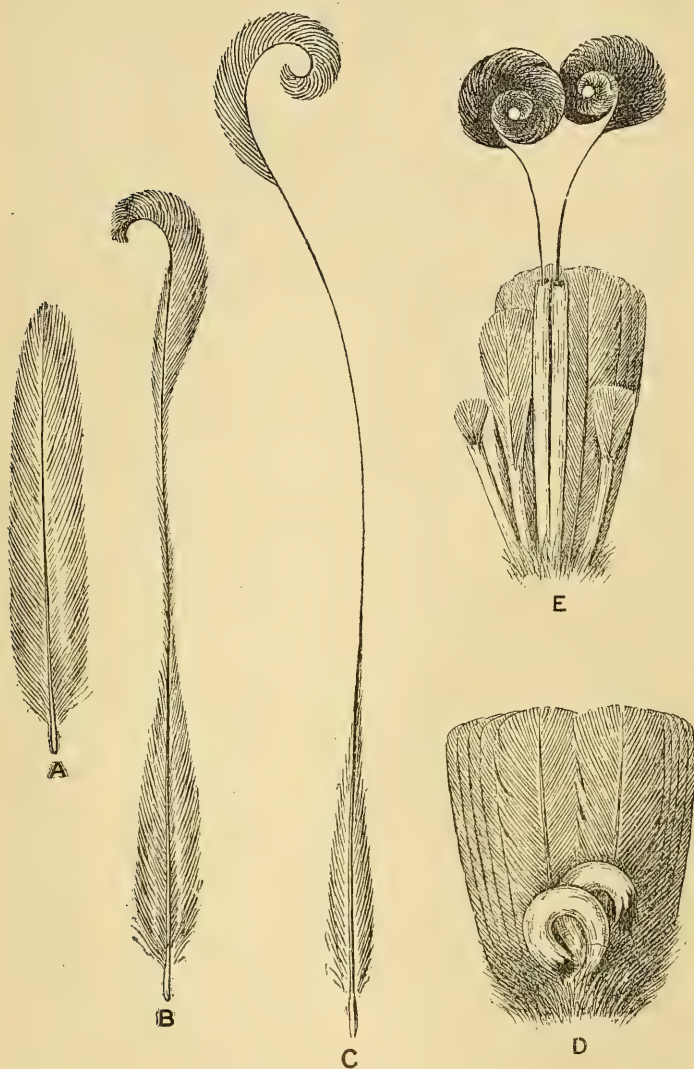
In the fourth year the fully adult plumage is assumed.

These changes of plumage appear to be irregular in birds kept in captivity.

The following statement, which has been made by Sharpe (Monogr. Parad.), requires correction. In his description of the middle tail-feathers of the *young male* of *C. regius* he writes: "From the excellent series in the British Museum it would appear that the curve is gradually continued upon the feather itself, and that when the twist is complete the metallic green colour is assumed without a change of feather. One young male before me has one racket brown, and the other metallic-green." The fine and complete series of the closely allied form brought home by our recent expeditions proves that these statements are incorrect. The tightly-curved metallic green-tipped middle tail-feathers are always acquired by moult with the fourth year's plumage, and cannot possibly be the result of a change of colour without a moult. When the green-tipped feathers first appear they are enclosed in two curious circular sheaths, which lie partially one above the other and look for all the world like miniature motor-tyres (text-fig. 2, D). The specimen mentioned by Sharpe as having one racket brown and the other green is a male example changing from the plumage of the third year to that of the adult.

In *C. r. claudii* the changes in the middle pair of tail-feathers are shown year by year until at the fourth moult the tightly-curved metallic-green feathers are assumed. In the first and second year's plumage these feathers are normally shaped and similar to those of the female (text-fig. 2, A).

Text-fig. 2.



Middle tail-feathers of the male of *Cicinnurus r. claudii*, subsp. n.

A. First and second year's plumage.

B, C. Third year's plumage.

D, E. Fourth year's plumage: adult.

In the third year they become much lengthened and cross one another near the base, as in the adult male, but the shaft, especially the basal half, is very narrowly webbed on both sides with brown vanes edged with orange or reddish, and the terminal portion, about 25 mm. in length, has a wider brown web, about 5 mm. wide, and curled inwards. As these feathers attain their full length of about 150 mm. the middle portion of the shaft becomes bare and the terminal brown curled portion, which has a slight greenish gloss, becomes more tightly twisted (text-fig. 2, B & C). At the fourth moult the male assumes the full plumage of the adult, and the middle pair of tail-feathers, with perfectly formed green curls, are protruded enclosed in curious curled sheaths like motor-tyres (text-fig. 2, D, E).

Normally the male appears to assume adult plumage at the fourth moult. This is shown step by step in the unique series of skins before me.

I have named this well-marked subspecies in honour of Mr. Claude H. B. Grant, who did such good work during the B. O. U. Expedition and collected most of the specimens of *C. r. claudii*.

The range of this subspecies extends eastwards to South-east New Guinea and at least as far as Collingwood Bay on the north coast; westwards it ranges to Misol.

The British Museum possesses examples of *C. r. coccineifrons* Roths. from Jobi Island, North New Guinea (*J. M. Dumas*), and Humboldt Bay (*W. Goodfellow*). The true *C. regius* Linn. is confined to the Aru Islands. It is rather larger than *C. r. claudii*, with a wing-measurement of 103–5 mm. in the male.

Mr. Walter Goodfellow made an interesting observation on the habits of this subspecies. While watching some Pigeons on the opposite bank of the river through his glasses, he saw a small bird rise from the top of a tree and soar into the air like a Sky-Lark. After it had risen about 30 ft., it suddenly seemed to collapse and dropped back into the tree as though it had been shot. It proved to be a male King Bird-of-Paradise, and probably this soaring habit is a part of the display not

indulged in by captive birds confined in comparatively small cages. For particulars of the display of this King Bird-of-Paradise the reader is referred to an article on the subject by Sir William Ingram, which appeared in 'The Ibis,' 1907, pp. 225-229, with a coloured plate, v., and text-figures 8 & 9 drawn from life by Mr. G. E. Lodge.

"This King Bird-of-Paradise is quite the commonest member of the Paradiseidæ throughout the flats, but does not extend into the mountains. Its clear and distinct call was heard throughout the jungle. It is one of the first of the common birds to be left behind when the mountain-ranges are reached."—*C. H. B. G.*

Diphyllodes speciosa.

Le Magnifique de la Nouvelle Guinée ou Le Manucode à Bouquets D'Aubent. Pl. Enl. iii. p. 194, pl. 66 (No. 631) (1774). [No definite locality given.]

Paradisea speccosa (sic)* Bodd. Tabl. Pl. Enl. p. 38 (1783).

Paradisea magnifica Pennant, in Forst. Ind. Zool. p. 40 (1795); also founded on D'Aubenton's Pl. Enl. (No. 631).

Diphyllodes seleucides Lesson, Hist. Nat. Ois. Paradis, Synop. p. 16 (1835).

Diphyllodes magnificus Lesson, t. c. p. 191, pls. xix., xx. (1835); van Oort, p. 102 (1909); Roths. & Hartert, N. Z. xx. p. 521 (1913).

Diphyllodes speciosus, var. *chrysopterus* Elliot (ex Gould MS.), Monogr. Paradis. pl. 13 (1873) [Jobi Island].

Diphyllodes jobiensis Meyer, Zeit. ges. Orn. ii. p. 388 (1885).

Diphyllodes chrysoptera Ogilvie-Grant, P. & P. p. 271 (1912); id. Ibis, 1913, p. 84.

a-d. ♀ ad. et ♂ ♀ imm. White Water Camp, Kaparé River, 12th Oct.-20th Nov. 1910. [Nos. 307, 352, 356, 423, *C. H. B. G.*]

e. ♀. Wataikwa River, 20th Oct. 1910. [No. 1400, *G. C. S.*]

* Undoubtedly a misprint for *speciosa*.

f-t. ♂ ♀ et ♂ imm. Iwaka River, 23rd Jan.-5th Feb. 1911. [Nos. 901, 912, 919, 931, 954-56, 973, 974, 977, 978, 994-96, *C. H. B. G.*]

u-t'. ♂ ♀ et ♂ ♀ imm. Camp 3, Utakwa River, 2500 ft., 20th Nov. 1912-9th Jan. 1913. [*C. B. K.*]

u', v'. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 6th & 12th Jan. 1913. [*C. B. K.*]

Adult and immature male. Iris dark brown, orbits and streak behind the eye bluish-white; bill bluish-white; inside of the mouth and gape bright green; feet bright Prussian blue.

Young male. Iris grey-brown, streak behind the eye and gape fleshy; bill sooty-black, lighter at the base and tip of upper mandible; inside of the mouth orange; feet bright Prussian blue.

Adult female. Iris dark brown, streak behind the eye bluish-white or pale cobalt; bill bluish-ash or pale cobalt, cutting-edge and tip black, inside of the mouth grass-green; feet Prussian blue or dull cobalt.

Young female. Iris brown, streak behind eye and gape bluish-white; bill bluish-white, culmen and apical portion sooty, inside of the mouth orange; feet bright Prussian blue.

In our series there are six young birds in first plumage, three males (Nos. 356, 996, and specimen *r'* from Utakwa River), and three females (No. 307 and specimens *s'* & *t'*). These have the wing-coverts and inner quills edged with russet, and the barring on the underparts less regular and generally rather further apart than in adult females and males in second plumage, which have the wing-coverts and quills bordered with olive. Adult males from November to January are in moult.

"The Claret-backed Golden-winged Bird-of-Paradise was only observed in the foothills and mountains where it was plentiful, especially females and immature birds of both sexes.

"Several were shot in large flowering trees, where they were feeding in company with Sun-birds and various species of Honey-eaters."—*C. H. B. G.*

Messrs. Rothschild and Hartert (*op. cit.* p. 521) consider

that their specimens of *Diphyllodes* from the Setakwa River are typical examples of *D. magnifica* (Pennant), and that I was wrong in referring birds from the Mimika River, etc., to *D. chrysoptera* Elliot. I have again looked carefully into the matter and find that *D. magnifica* and *D. chrysoptera* are both synonymous with *D. speciosa* (Bodd.). This will be seen from an examination of the synonymy given above, which Messrs. Rothschild and Hartert now agree is correct. The British Museum contains the male type of *D. chrysoptera* as well as a second adult male specimen of the same bird—both native skins—from the Gould Collection, believed to have come from the Island of Jobi; these agree entirely with our male specimens from Southern New Guinea listed above. There are also in the British Museum Collection a number of orange-winged native-made skins, exactly like our males, which are said to have come from the Arfak Mountains. All these bright orange-winged birds appear to me to be quite distinct from the specimens with clay-coloured wings found in the adjacent Island of Salawatti and brought for sale to the little island of Sorong off North-western New Guinea. Lord Rothschild, who possesses a large series of these birds, mostly trade-skins, is of opinion that the two forms intergrade, but I think this is a mistake, as all our worn and faded specimens, which might be regarded as intermediate links at the first glance, are clearly referable to *D. speciosa*. I therefore propose to name the bird with clay-coloured wings from Salawatti

+ *Diphyllodes rothschildi*, sp. n.

Diphyllodes magnifica Sharpe (nec Pennant), Monogr. Paradis. i. pl. xxxiii. (1896).

Type in the British Museum. ♂ ad. Island of Salawatti, Feb. 1870. J. Gould Coll.

Messrs. Rothschild and Hartert, as already mentioned, refer all the birds from South-west New Guinea and Arfak to *D. magnifica* (Pennant), which was founded on D'Aubenton's pl. 631. The origin of the specimen figured was not

definitely stated, but it appears without doubt to have been an example of the form found in Western New Guinea, though the upper back is depicted as dark crimson, instead of dark claret-colour.

It seems certain that in 1774 no bird-skins from Eastern New Guinea had been brought to Europe.

The synonymy of the orange-winged form from Eastern New Guinea, with the more rufous head and more crimson upper back, would appear to stand as follows :—

Diphyllodes speciosa hunsteini.

Diphyllodes hunsteini Meyer, Zeit. ges. Orn. ii. p. 389, pl. xxi. (1885) [Owen Stanley Mts.].

Diphyllodes chrysoptera septentrionalis Meyer, J. f. O. 1892, p. 260 [North-east New Guinea].

Diphyllodes xanthoptera Salvad. Ann. Mus. Civ. Genov. xxxvi. p. 110 (1896) [Moroka, Astrolabe Mts.].

It will thus be seen that I am able to recognise three forms belonging to this group of *Diphyllodes* :—

D. speciosa (Bodd.). Hab. Western New Guinea.

D. s. hunsteini Meyer. Hab. Eastern New Guinea.

D. rothschildi. Hab. Island of Salawatti.

The last-named bird with clay-coloured wings appears to be confined to Salawatti. Mr. Goodfellow informs me that there are no Paradise-Birds on the island of Sorong, and that skins purchased there are brought over from Salawatti by the natives.

****Pteridophora alberti.***

Pteridophora alberti Meyer ; Roths. & Hartert, N. Z. xx. p. 522 (1913).

A male in moult was procured on Mt. Goliath by A. S. Meek.

****Paradigalla brevicauda.***

Paradigalla brevicauda Roths. & Hartert, N. Z. xx. p. 523 (1913).

This new form of Paradise-Bird was procured on Mt. Goliath by A. S. Meek, and does not appear to have been met with elsewhere.

Paradigalla intermedia.

Paradigalla intermedia Ogilvie-Grant, Bull. B. O. C. xxxi. p. 105 (1913).

a, b. ♂ vix ad. Camp 6 c, Utakwa River, 5500 ft., 24th & 25th Feb. 1913. [*C. B. K.*]

c. ♂ juv. Camp 9, Utakwa River, 5500 ft., 27th Jan. 1913. [*C. B. K.*]

The type-specimen, an *almost adult male*, is similar to *P. carunculata* Lesson, from the Arfak Mountains, but is much smaller and has a conspicuously shorter tail. The nasal caruncles and base of the bill are lemon-yellow. Total length about 270 mm.; wing 155–160; tail 92 (to end of middle tail-feathers 68); tarsus 43. In *P. carunculata* the wing measures 170–180 mm. and the tail 167.

In the type-specimen only the middle pair of tail-feathers are those of the adult plumage and are much shorter than the five outer pairs, which measure about 92 mm. This species is intermediate between *P. carunculata* and *P. brevicauda* Roths. & Hartert, from Mount Goliath.

The latter shows the same peculiarity as the present species, the tail in the young bird being *much longer* than that of the adult.

***Parotia carolæ?**

Parotia carolæ Meyer; van Oort, p. 523 (1909); Roths. & Hartert, N. Z. xx. p. 523 (1913).

Females, apparently of the typical form or of *P. c. berlepschi*, were procured on Mt. Goliath by A. S. Meek; also on the Noord River by Mr. H. A. Lorentz.

Parotia carolæ meeki.

Parotia carolæ meeki Roths.; Ogilvie-Grant, P. & P. p. 270 (1912); id. Ibis, 1913, p. 83; Roths. & Hartert, N. Z. xx. p. 523 (1913) [Utakwa Valley, 3000 ft.].

a-c. ♀ et ♂ imm. Iwaka River, 5th & 12th Feb. 1911.
[Nos. 1015, 1031, *C. H. B. G.*]

d. ♀. Camp 3, Utakwa River, 2500 ft., 27th Nov. 1912.
[*C. B. K.*]

e-m. ♂ ♀ et ♂ imm. Camp 6 A, Utakwa River, 2900 ft.,
7th-18th Jan. 1913. [*C. B. K.*]

n, o. ♂ ♀. Camp 6 B, Utakwa River, 4200 ft., 29th Jan.
& 5th Feb. 1913. [*C. B. K.*]

Nearly adult male. Iris lemon-yellow, ring next the pupil
grey; bill and feet black.

Immature male. Iris yellow; bill black; gape green; feet
black.

Adult female. Iris yellowish-white, grey near the pupil;
bill sooty-black; gape green; feet sooty-brown.

This subspecies is closely allied to *P. c. berlepschi*,
Kleinschm., but is distinguished by having the upper portion
only of the throat blackish and the silvery-white edge of the
crest commencing at the base of the bill and extending to
above the eye.

This fine bird is new to the British Museum.

“Meek’s Six-plumed Bird-of-Paradise was only observed
in the mountains where it was by no means uncommon, but
far from tame. The old males, of which several were seen,
were especially wild and kept carefully out of shot. Its
curious call ‘prat, prat,’ first drew the Dyak’s and my own
attention to the species. The call is more often heard in
the early hours of the morning than during the rest of the
day; in fact the bird appears to be one of the earliest risers.”
—*C. H. B. G.*

***Lophorhina superba feminina*, subsp. n.**

Lophorhina superba minor Roths. & Hartert (nec Ramsay),
N. Z. xx. p. 522 (1913).

Adult male. Similar to the male of *L. minor*, but somewhat
larger and with the fringes to the long feathers of the cervical
plumes generally wider. Iris, bill, and feet black, genys
pale yellow. Wing 135-139 mm. as compared with 126-
130 mm. in *L. minor*.

Adult female. Differs from the female of *L. minor* in having the crown brown much like the back, each feather being spotted at the tip with buff, the forehead and a band of feathers extending from the lores to the sides of the occiput strongly spotted at the extremity with white. In *L. minor* the top and sides of the head, including the forehead, are black, generally with a band of white dots extending from above the eye to the occiput, but this seems to be absent in the oldest females. Again, in the new form the ground-colour of the underparts from the throat downwards is rufous-buff, instead of whitish. Wing 121–123 mm. as compared with 110–115 in *L. minor*.

a. ♀. Camp 6 A, Utaqua River, 2900 ft., 17th Jan. 1913. [*C. B. K.*]

b-f. ♂ ♀ et ♂ imm. Camp 6 B, Utaqua River, 4200 ft., 2nd–23rd Feb. 1913. [*C. B. K.*]

g-l. ♂ ♀ et ♂ imm. Camp 6 c, Utaqua River, 5500 ft., 18th–21st Feb. 1913. [*C. B. K.*]

m-q. ♂ et ♂ imm. Camp 9, Utaqua River, 5500 ft., 21st Jan.–4th Feb. 1913. [*C. B. K.*]

The types of this subspecies are a male and female, specimens *b* and *f*, procured at Camp 6 B, Utaqua River, on the 2nd and 23rd of February 1913 respectively.

We have received no notes respecting this Bird-of-Paradise.

An adult female of *L. s. feminina* was procured by A. S. Meek in the Utaqua Valley, 3000 ft., but was mistaken by Messrs. Rothschild and Hartert for the young of *L. s. minor*.

This female had the iris steel-blue; bill black; feet Vandyke-brown.

Loboparadisea sericea.

Loboparadisea sericea Roths. Bull. B. O. C. vi. p. xvi (1896); id. N. Z. iv. p. 169, pl. ii. fig. 2 (1897); Roths. & Hartert, N. Z. xx. p. 523 (1913).

a-c. ♂ ♀ imm. Camp 6 B, Utaqua River, 4200 ft., 28th Jan.-5th Feb. 1913. [*C. B. K.*]

d-i. ♂ ♀ et ♂ ♀ imm. Camp 6 c, Utaqua River, 5500 ft., 17th-25th Feb. 1913. [*C. B. K.*]

Nasal lappets yellow.

The *adult males* differ from the description and figure given by Mr. Rothschild in having the upperparts washed with golden-olive, but it is obvious that the typical specimens, which are native-made skins, have been dried over fire and somewhat scorched and discoloured.

The *adult female*, as described by Messrs. Rothschild & Hartert from the three specimens collected by A. S. Meek on Mount Goliath, has the lower back, rump, and entire underparts pale golden.

Young birds, both male and female in first plumage, have the entire upperparts, including the crown, dark olive-brown with darker margins to the feathers, giving these parts a somewhat squamose appearance; the underparts are yellowish-buff, inclining to rufous on the chest and with darker edges to the feathers producing a streaked appearance. At this age the nasal lappets are not visible in the male.

In the second year's plumage both male and female have the lower back, rump, and underparts mixed with pale golden feathers like those of the adult female, but the males are easily distinguished from the females by their partially developed nasal lappets.

The series of this beautiful little Bird-of-Paradise is a very welcome addition to the British Museum, which contained a male native-made skin, one of the co-types, and an adult female from the Goliath Mountains, both received in exchange from the Tring Museum.

We have, unfortunately, received no particulars concerning this species except a note as to the colour of the nasal lappets, which are yellow in the adult male, not dark blue with yellow tips as shown in Mr. Rothschild's plate, which was coloured from the dried skin.

Loria loriæ.

Loria loriæ Salvad. Ann. Mus. Civ. Genov. xxxiv. p. 151 (1894) [Moroka, Astrolabe Mts.] ; Roths. & Hartert, N. Z. xx. p. 524 (1913).

Cnemophilus mariæ De Vis; Sclater, Ibis, 1895, p. 343 [Mount Maneao, Owen Stanley Range].

Loria mariæ Sclater, Ibis, 1895, pl. viii.; Sharpe, Monogr. Paradis. ii. p. 45, pl. 25 (1896).

a. ♀. Camp 6 B, Utakwa River, 4200 ft., 23rd Feb. 1913. [C. B. K.]

b-f. ♂ ♀ et ♂ ♀ imm. Camp 6 c, Utakwa River, 5500 ft., 20th-23rd Feb. 1913. [C. B. K.]

g-l. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 25th Jan.-4th Feb. 1913. [C. B. K.]

m. ♀. Camp 11, Utakwa River, 8000 ft., 7th Feb. 1913. [C. B. K.]

Adult male. Iris, bill, and feet black, genys pale primrose-yellow.

The specimens listed above appear to be perfectly similar to typical examples from Moroka District, Astrolabe Mountains. [Cf. Sharpe, *op. cit.* i. App. p. xxxv (1898).]

Male: Wing 99-103 mm. Female: Wing 99-100 mm.

Amblyornis inornatus musgravii.

Amblyornis musgravii Goodwin, P. Z. S. 1889, p. 451 [Mt. Musgrave, Owen Stanley Range].

Amblyornis inornatus musgravii Roths. & Hartert, N. Z. xx. p. 525 (1913) [Utakwa Valley and Mt. Goliath].

Amblyornis macgregoriae De Vis, Ann. Rep. Brit. N. Guinea, 1888-9, App. C, pp. 113, 115 (1890) [Mt. Musgrave, Owen Stanley Range].

a, b. ♀ et ♂ imm. Camp 6 B, Utakwa River, 4200 ft., 4th & 5th Feb. 1913. [C. B. K.]

The British Museum possesses only female or immature male specimens of typical *A. inornata* (Schleg.), from Arfak, but, as Messrs. Rothschild and Hartert have pointed out, these are decidedly browner, especially on the crown, than



MENPES, PRESS, WATFORD

XANTHOMELUS ARDENS. 1. ♂ 2. ♀

specimens from the Owen Stanley Range which have been named *A. i. musgravii*. To the latter, and not to the Arfak form, must be referred the specimens listed above from the Utakwa Valley. This Bower-Bird was also obtained on Mt. Goliath by A. S. Meek.

***Xanthomelus ardens*. (Pl. I.)**

Xanthomelus ardens, D'Albert. & Salvad.; Salvad. O. P. ii. p. 663 (1881); van Oort, p. 100, pl. iii. (1909); Ogilvie-Grant, P. & P. p. 272 (1912); id. Ibis, 1913, p. 85.

Xanthomelus aureus ardens Roths. & Hartert, N. Z. xx. p. 524 (1913).

a-g. ♂ ♀ et ♂ imm. Wataikwa River, 26th Sept.-12th Oct. 1910. [Nos. 1247, 1325, 1337-39, 1352, 1353, G. C. S.]

Adult male. Iris yellow; bill flesh-colour, shading to pale brown at the tip; feet dull slate-colour.

Male in partial adult plumage. Like the adult.

Immature male. Iris dull yellow; bill flesh-colour, shading into brown; feet dark dull olive.

Adult female. Iris dark brown; bill brown; feet dull olive-slate-colour.

Dr. van Oort has explained the reason why Sharpe, in his 'Monograph of the Paradiseidæ,' wrongly figured the imperfect type-specimen of *X. ardens* with the cheeks and throat black. He has given a figure of one of the males collected by Dr. Lorentz to show the scarlet sides of the head and yellow throat; but as it conveys quite a false idea of the brilliant orange-scarlet colour of the head and mantle, and as Sharpe's figure [*op. cit.* ii. pl. xxv. (1896)] is largely drawn from the artist's imagination and is most misleading, I have ventured once more to figure this very striking species, showing for the first time the female in adult plumage, which was not previously known.

Among the three adult males included in our series there is one especially magnificent bird (No. 1325), with

the orange-scarlet tippet beautifully developed and no doubt capable of being erected to form a conspicuous ruff round the head, when the bird is showing off to the females. There seems to be no possible reason for regarding this very distinct bird as a subspecies of *X. aureus* Linn., from the Arfak Mountains. The latter has a much stouter bill; the cheeks, chin, and throat black; the mantle more orange; the lesser wing-coverts black and the inner secondaries devoid of black tips, only the first five being rather narrowly marked with black at the extremity.

A second adult male (No. 1339), which had probably recently assumed adult plumage, has blackish spots on the lores and just below the ears; the thighs are also blackish instead of yellow. The third adult male (No. 1338), which has been given to the Tring Museum, has the inner webs of the innermost secondaries black along the terminal half; this is probably a mark of immaturity.

The *adult female* (No. 1247) has the upperparts, including the top and sides of the head, brown tinged with olive, the throat whitish and the underparts pale yellow, the feathers of the chest being margined with brownish. The wings are brown like the back; the shafts and inner webs of the quills viewed from below are bright yellow. Wing 135 mm.

A *young male*, apparently in second plumage (No. 1353), resembles the adult female, but the chest-feathers are brownish, not yellow edged with brown; and among the feathers of the mantle there are a few orange-red plumes making their appearance and probably heralding the third plumage.

Two males (Nos. 1337 & 1352) apparently coming out of the third year's plumage, resemble the adult male as regards the head, tippet, and underparts, but the back, rump, upper tail-coverts, and wings are still in the plumage of the third year, being brown strongly washed with olive on the back and on the webs of the secondaries.

This splendid Bower-Bird is new to the British Museum.

The specimens figured are ♂ No. 1325 and ♀ No. 1247.

***Chlamydodera lauterbachii*.**

Chlamydodera lauterbachii Reichenow, Orn. Monatsb. v. p. 24 (1897); id. J. f. O. 1897, p. 215, pl. vi. [North-east New Guinea, ♂]; Ogilvie-Grant, P. & P. p. 272 (1912); id. Ibis, 1913, p. 85 [Southern Dutch New Guinea].

a. ♀. Kamura River, 18th May, 1910. [No. 1157, G. C. S.]

Iris brown; bill horn-black; feet pale olive-slate-colour.

This specimen is unlike any of the allied forms; it has the underside washed with yellow and is almost certainly the female of the Orange-crowned Bower-bird, *C. lauterbachii*, of which the male was described and figured by Dr. Reichenow from a unique specimen procured in North-east New Guinea. Our specimen differs chiefly from the figure given in having the sides of the head and crown greyish-brown tinged with olive like the rest of the upperparts and in being less yellow on the underparts.

Its measurements are likewise smaller. Total length in the flesh 288 mm.; wing 122; tail 100; tarsus 37.

The male-type was procured on the Jagei River, a tributary of the Ramu River, probably at no great elevation. Though the two specimens were obtained in localities so far apart, there seems to be no reason why they should not be male and female of the same species. The female obtained by the B. O. U. Expedition possesses many characteristics in common with the male-type of *C. lauterbachii*, and the differences in plumage are just what one might expect to find in the female of that species.

The species is new to the British Museum.

***Ælurædus melanotis*.**

Ælurædus melanotis Gray; Sharpe, Cat. vi. p. 383 (1881).

Ailurædus melanotis melanocephalus Roths. & Hartert (nec Ramsay), N. Z. xx. p. 525 (1913) [Utakwa River, 2000-3000 ft.].

a-d. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 16th Dec. 1912-11th Jan. 1913. [C. B. K.]

Iris red ; bill pale greenish-horn-colour ; feet pale lavender.

These Cat-birds are clearly referable to the Aru Island species, and not to *Æ. m. melanocephalus* Ramsay as stated by Messrs. Rothschild and Hartert. They are possibly a trifle smaller than typical Aru birds, but with only one male for comparison it would be unwise to distinguish them on that account, and I cannot find any other difference.

The wing-measurements are as follows :—

<i>Utakwa River.</i>		<i>Aru Islands.</i>	
	Wing.		Wing.
♂	160 mm.	♂ (type)	167 mm.
[♀] ...	156	[♂]	167
♀	153	[♂]	165
♀	153	[♂]	164
		♂	161
		[♀]	158
		♀	155

Males may generally be easily recognised by their larger, often much larger, bills.

The male and female differ from *Æ. m. melanocephalus* Ramsay, from South-eastern New Guinea, in having the lores white instead of black ; the patch at the base of the lower mandible mixed sooty-brown and buff, instead of black ; the feathers of the crown with larger buff-coloured spots, giving these parts a much less black appearance, the feathers of the chin and throat whitish, the latter with indistinct blackish tips. In *Æ. m. melanocephalus* the chin is blackish and the feathers of the throat are white strongly margined with black. The feathers of the chest are whitish-buff, with brownish margins and greenish fringes, instead of buff with wide blackish margins ; thus the chest in *Æ. m. melanocephalus* has a much blacker appearance, the light middles of the feathers of these parts being considerably reduced in size. The plumage of the two forms is otherwise much the same.

“The Barbet-like Cat-bird was a common species inhabiting the dense jungle, and was usually seen in pairs. It

was generally met with on or near the ground, and was at all times extremely wary and difficult to secure. Its peculiar hissing alarm note, not unlike the spit of an angry cat, was often heard, but the bird was rarely seen."—*C. H. B. G.*

Ælurædus buccoides.

Ailurædus buccoides (Temm.); van Oort, p. 99 (1909); Roths. & Hartert, N. Z. xx. p. 526 (1913).

Ælurædus stonii Sharpe, Cat. vi. p. 387 (1881); Ogilvie-Grant, P. & P. p. 273 (1912); id. Ibis, 1913, p. 86.

a-c. ♂ et ♀ imm. Upper Mimika River, 18th Feb. & 11th April, 1910. [*W. G.*, & Nos. 1067, 1127, *G. C. S.*]

d-k. ♂ ♀ et ♂ imm. Parimau, Mimika River, 21st Sept.—25th Dec. 1910. [Nos. 225, 583, 707, 712, 806, 823, *C. H. B. G.*; 1484, *G. C. S.*]

l, m. ♂ ♀. Wataikwa River, 1st & 20th Oct. 1910. [Nos. 1287, 1405, *G. C. S.*]

n. ♀. Iwaka River, 24th Jan. 1911. [No. 909, *C. H. B. G.*]

o, p. ♂ ♀. Launch Camp, Setakwa River, 7th Nov. & 23rd March, 1913. [*C. B. K.*]

q. ♀. Canoe Camp, Setakwa River, 16th Nov. 1912. [*C. B. K.*]

Adult male and female. Iris crimson, deep red, or bright reddish-brown; bill slate-blue or light slate-colour; feet bluish-ash or bluish-slate-colour.

Immature male. Iris bright yellowish-brown; bill mottled bluish-horn-colour; feet bluish-ash-colour.

Our series of specimens may be considered as typical examples of *Æ. buccoides* (Temm.), the type of which, as Dr. van Oort has pointed out, came from Lobo, Triton Bay, somewhat further west. There are nine males and eight females, and an examination of these reveals the following points:—

1. All have the ground-colour of the underparts dull ochre from the throat to the vent, and obviously belong to the species found in South-east New Guinea, which has been named *Æ. stonii* by Sharpe.

2. The male has the bill considerably larger than that of the female.

3. The size of the black spots on the underparts is subject to considerable individual variation, the spots being larger in younger birds and fewer and much smaller in the oldest males, with the largest bills.

4. Specimens of *Æ. stonii* from South-east New Guinea can be matched exactly among birds in the present series, with the exception, perhaps, of the type-specimen from Laloki River (*O. C. Stone*), which has the spots rather smaller and less numerous on the chest.

The form previously known as *Æ. buccoides* from Northern New Guinea, Waigiu, Salawatti, etc., has now been renamed *Æ. b. oorti* by Messrs. Rothschild and Hartert.

Temminck's figure of *Æ. buccoides* [Pl. Col. ii. p. 575 (1835)], founded on S. Müller's specimens from Lobo Bay, certainly agrees better with the bird from Northern New Guinea, having the ground-colour of the underparts paler as in that form, now called *Æ. b. oorti*; but the locality, Lobo, indicates clearly that Dr. van Oort is right in his conclusions. The supposed difference of the size of the bill noted by Messrs. Rothschild and Hartert is, as already shown, merely a sexual character.

The immature bird has the feathers of the crown yellowish-buff with dark greenish middles.

There is no great difference in size between the sexes, but males are generally somewhat larger, as the measurements will show.

8 adult males : wing 131-145 mm.

6 adult females : wing 127-134 mm.

1 immature male : wing 126 mm.

1 immature female : wing 125 mm.

Family EULABETIDÆ.

Mino dumonti.

Mino dumontii Less. ; Sharpe, Cat. xiii. p. 111 (1890) ; van Oort, p. 106 (1909) ; Roths. & Hartert, N. Z. x. p. 113 (1903), xx. p. 527 (1913) ; Ogilvie-Grant, P. & P. p. 274 (1912) ; id. Ibis, 1913, p. 87.

a. Ad. Mimika River, 28th April, 1910. [No. 1135, *G. C. S.*]

b. ♂. Upper Mimika River, 18th Feb. 1910. [No. 1069, *G. C. S.*]

c-h. ♂ ♀ et ♂ imm. Parimau, Mimika River, 17th Dec. 1910. [Nos. 44, 67, 659, 660, 749, *C. H. B. G.*; 1478, *G. C. S.*]

i, k. ♂ ♀. White Water Camp, Kaparé River, 25th-26th Oct. 1910. [Nos. 371, 375, *C. H. B. G.*]

l-r. ♂ ♀. Wataikwa River, 1st-11th Oct. 1910. [Nos. 1288, 1289, 1303, 1304, 1347, 1348, 1351, *G. C. S.*]

s. ♂. Iwaka River, 28th Jan. 1911. [No. 930, *C. H. B. G.*]

t-x. ♂ ♀. Launch Camp, Setakwa River, 3rd-21st Oct. 1912. [*C. B. K.*]

y, z. ♀. Camp 3, Utakwa River, 2500 ft., 22nd Dec. 1912. [*C. B. K.*]

Adult. Iris dark brown (in one male it was spangled with gold and had an outer ring of that colour); bare skin of the head and throat orange; bill deep orange; feet deep yellow.

Younger birds have the bare sides of the head much smoother than the adult.

"Dumont's Grackle is nearly as common as *Melanopyrrhus o. robertsoni*, and often consorts with that subspecies when feeding. It is more often seen in pairs than in parties or flocks."—*C. H. B. G.*

Melanopyrrhus orientalis robertsoni.

Mino robertsoni D'Albertis, Ann. Mus. Civ. Genov. x. p. 12 (1877); id. Ibis, 1877, p. 368 [Fly River].

Melanopyrrhus robertsoni Sharpe, J. Linn. Soc., Zool. xiv. pp. 633, 687 (1879); Ogilvie-Grant, P. & P. p. 274 (1912); id. Ibis, 1913, p. 87.

Melanopyrrhus anais orientalis Roths. & Hartert (nec Schleg.) N. Z. x. p. 111 (1903), xx. p. 526 (1913); van Oort, p. 106 (1909).

a-c. ♂ ♀. Wakatimi, Mimika River, 1st Jan.-28th Feb. 1911. [Nos. 208, 1049, 1050, *C. H. B. G.*]

d-i. ♂ ♀. Upper Mimika River, 5th Feb.-31st March, 1910. [*W. G.* & Nos. 1029, 1030, 1115, *G. C. S.*]

k-u. ♂ ♀ et ♂ ♀ imm. Parimau, Mimika River, 30th Aug.-18th Dec. 1910. [Nos. 43, 57, 107, 124, 125, 564, 610, 732, 757, 762, *C. H. B. G.*]

v. ♂. Wataikwa River, 28th Oct. 1910. [No. 1451, *G. C. S.*]

w-c'. ♂ ♀. Launch Camp, Setakwa River, 4th Oct.-9th Nov. 1912. [*C. B. K.*]

d'. ♀. Canoe Camp, Setakwa River, 5th Nov. 1912. [*C. B. K.*]

Adult. Iris clear yellow; bill pale lemon or greenish-yellow; feet pale yellow-ochre, creamy yellow, or pale yellow.

Young. Iris, bill, and feet pale yellow.

This subspecies, originally described from the Fly River, was hitherto unrepresented in the British Museum Collection. A good deal of confusion has occurred about these Starlings, and Messrs. Rothschild and Hartert, in their latest remarks on the subject (*cf.* N. Z. xx. p. 526), have stated, obviously in error, that the name *M. o. robertsoni* should be referred to the birds from the north with a black patch on the occiput. In the first place, *M. orientalis* is *not* a subspecies of *M. anais* Lesson, as has been stated by these authors and by Dr. van Oort, but is a perfectly distinct species, which occurs in the same district as *M. orientalis*. *M. anais*, moreover, is a structurally different bird, with the long orange feathers of the chest rather stiff and disintegrated and *each concealing a short glossy black feather at its base* in the fully adult bird; a character never found in the adults of *M. orientalis* or *M. o. robertsoni*. Another point is that in *M. anais* the head, including the crown and occiput, is glossy black both in the young and in the adult.

As regards *M. orientalis* and *M. o. robertsoni*, it is the former which has a black spot on the occiput in the adult bird and inhabits Northern New Guinea, from Arfak and Humboldt Bay eastwards to North-east and South-east New Guinea, while *M. o. robertsoni* has the crown and occiput uniform orange in the adult bird, and ranges throughout

Southern New Guinea, extending eastwards along the coastal districts to Redscar Bay.

The specimen catalogued as *M. orientalis* by Sharpe (Cat. xiii. p. 115, *b.* Imm. sk. Port Moresby. K. Broadbent) is undoubtedly referable to that species. As is proved by specimens in the Tring Museum, the range of *M. orientalis* meets with that of *M. o. robertsoni* on the Aroa River, the former having been obtained by Meek on the Upper Aroa, while the latter was found by the same collector on the Lower Aroa [*cf.* N. Z. xiv. p. 467 (1907)].

It must be remembered that in both these forms the young bird has the crown black in the immature plumage, when all the feathers of the underparts from the throat to the belly are black fringed with yellow. For instance, in the present series specimen *l* (No. 57) has the crown entirely black with the exception of a few small yellow feathers appearing on the forehead, specimen *t* (No. 757) is in a more advanced stage with more orange on the crown, while Nos. 125, 762, and 124 represent still more advanced stages, the two last named having only one or two black feathers left on the crown, though the dull black feathers of the lower breast and belly being fringed with yellow clearly show that they are still quite young birds. In the fully adult of *M. orientalis* Schleg. [type from Bondey, west side of Geelvink Bay] a patch of black feathers is always retained on the occiput; while in the adult of *M. o. robertsoni* [type from the Fly River] the black on the head, as pointed out above, disappears at quite an early stage, and the whole crown and occiput become golden-orange like the nape.

In my remarks on *M. orientalis* (P. & P. p. 274, line 5 from the foot of the page), for "British" New Guinea, read "Northern" New Guinea. Among the fine series listed above attention may be specially drawn to specimen *v* (No. 1451), which has a narrow black band 4-5 mm. wide at the base of the culmen; also to specimen *d*, which, though a fully adult bird in other respects, has the throat mostly yellow and is moulting in new yellow and black feathers.

A few very high trees left standing near the huts at Wakatimi were the resort, morning and evening, of these

Starlings and various other species of birds. For a long time during the hot mid-day hours, Mr. Goodfellow had observed that some bird, possessing a remarkably sweet Thrush-like song, rested there, and, after many days of watching, he found it to be Robertson's Golden Grackle. He says that the notes of this Starling would not pass unnoticed even in countries where the birds, as a rule, have sweeter voices than those inhabiting New Guinea.

"Robertson's Golden Grackle is an exceedingly common bird everywhere and usually seen in large flocks, often in company with *M. dumonti*. In flight and habits it much resembles the European Starling, and appears to subsist chiefly on wild fruits and berries."—*C. H. B. G.*

***Lamprocorax metallica*.**

Calornis metallica (Temm.); Sharpe, Cat. xiii. p. 138 (1890) [part.]; Roths. & Hartert, N. Z. x. p. 114 (1903); van Oort, p. 107 (1909); Ogilvie-Grant, P. & P. p. 274 (1912); id. Ibis, 1913, p. 87.

Lamprocorax m. metallicus Roths. & Hartert, N. Z. xx. p. 527 (1913).

a, b. ♂ ♀. Wakatimi, Mimika River, 24th Dec. 1910 & 27th Feb. 1911. [Nos. 180, 1047, *C. H. B. G.*]

c-g. ♂ ♀. Upper Mimika River, 6th–27th Feb. & 31st March, 1910. [Nos. 1035, 1036, 1039, 1091, 1114, *G. C. S.*]

h-a'. ♂ ♀. Parimau, Mimika River, 4th Sept.–30th Dec. 1910. [Nos. 115, 486, 511, 551, 630, 631, 637, 696–8, 727–31, 875–7, *C. H. B. G.*; 1490, *G. C. S.*]

b'-l'. ♂ ♀. Launch Camp, Setakwa River, 12th Oct. 1912–29th Mar. 1913. [*C. B. K.*]

m', n'. ♂ ♀. Canoe Camp, Setakwa River, 27th & 29th Dec. 1912. [*C. B. K.*]

Iris deep orange or red; bill and feet black.

"This Glossy Starling was an exceedingly common bird everywhere, and was observed in flocks, often of hundreds, when passing overhead towards sundown. It has the habits and flight of the other Glossy Starlings.—*C. H. G. B.*

The following species was obtained flying in company

with *L. metallica*, from which it was not distinguished at the time.

***Lamprocorax mystacea*.**

Calornis mystacea Ogilvie-Grant, Bull. B. O. C. xxix. p. 28 (1911) ; id. P. & P. p. 274 (1912) ; id. Ibis, 1913, p. 87.

a-c. ♀ et ♀ imm. Parimàu, Mimika River, 3rd Oct.-16th Nov. 1910. [Nos. 294, 498, 506, *C. H. B. G.*] (*Including the type of the species.*)

The sexes of this new species are no doubt alike in plumage.

The female is most nearly allied to *L. altirostris* (Salvad.) and *L. cantoroides* (Gray) as regards the shape of the bill, which is short and high, but the feathers on the forehead are elongate, narrow, and semi-erect, partly concealing the base of the culmen ; the neck-hackles are much longer and narrower and of a uniform dull bronze-black ; the lower back, rump, and the underparts purplish-bronze ; the wings and tail dull greenish-bronze ; the scapulars, lesser and median wing-coverts brighter, a mixture of purplish and greenish-bronze. Tail wedge-shaped, as in *L. metallica*, the middle feathers being much the longest. Iris pale Naples-yellow ; bill and feet black. Total length 200 mm. ; culmen from the base of skull 21, from anterior wall of nostril to tip 13 ; wing 102 ; tail 78 ; tarsus 21.

Three females, two adult and one younger, were all shot among flocks of *L. metallica*. The differences between the two were not observed at the moment, and consequently no great effort was made to procure additional examples, and especially males. Specimen *c* (no. 506) is a younger female with much less gloss on the breast and underparts, and with a concealed white spot on the outer webs of the feathers of the belly.

***Paramythia olivaceum*.**

Paramythia montium olivaceum van Oort, Notes, xxxii. p. 213 (1910) [Hellwig Mts., 8700 ft.].

a. ♀. Camp 11, Utakwa River, 8000 ft., 1st Feb. 1913. [*C. B. K.*]

This handsome bird is new to the British Museum, where only *P. montium* De Vis from the Owen Stanley range was represented. It is easily recognised from the latter by having the feathers of the occiput white tipped with black instead of white shading into grey, and the back and secondaries olive-green instead of sap-green, and the outer feathers of the sides of the body blue, like the breast, instead of dull golden yellow; there are other minor differences. The difference in the marking of the black and white occipital plumes is not mentioned in Dr. van Oort's description of his bird from the Hellwig Mountains; this important character, coupled with the differently coloured side-plumes, induces me to regard it as specifically distinct.

Family DICRURIDÆ.

Dicrurus assimilis.

Chibia assimilis (Gray) ; Sharpe, Cat. iii. p. 239 (1877).

Dicruropsis carbonaria (Sharpe); Salvad. O. P. ii. p. 177 (1881).

Dicrurus bracteatus carbonarius van Oort, p. 105 (1909) [Etna Bay].

Dicrurus bracteatus assimilis van Oort, p. 105 (1909) [Noord River] ; Roths. & Hartert, N. Z. xx. p. 527 (1913).

a-d. ♀ et ♂ imm. Mouth of the Mimika River, 2nd-13th Dec. 1910. [Nos. 27, 29, 66, 112, *C. H. B. G.*]

e-i. ♂ ♀. Wakatimi, Mimika River, 22nd Aug. 1910-10th March, 1911. [Nos. 10, 29, 1090, 1141, 1142, *C. H. B. G.*]

k-n. ♂ ♀. Upper Mimika River, 5th Feb.-30th March, 1910. [Nos. 1028, 1068, 1112, 1113, *G. C. S.*]

o-u. ♂ ♀ et ♂ imm. Parimau, Mimika River, 29th Aug.-19th Dec. 1910. [Nos. 34, 135, 140, 517, 526, 599, 771, *C. H. B. G.*]

v. ♂. White Water Camp, Kaparé River, 21st Oct. 1910. [No. 358, *C. H. B. G.*]

w-y. ♂. Wataikwa River, 22nd Sept.-6th Oct. 1910. [Nos. 1223, 1241, 1308, *G. C. S.*]

z. [♂]. Kamura River, 15th Sept. 1910. [No. 1169, G. C. S.]

a'-f'. ♂ ♀. Launch Camp, Setakwa River, 10th Oct.-8th Nov. 1912. [C. B. K.]

g'-l'. ♀ et ♂ ♀ imm. Canoe Camp, Setakwa River, 27th Oct.-30th Dec. 1912. [C. B. K.]

Adult. Iris red or orange-red; bill and feet black.

Young. Iris dull grey; bill black, tip white; gape livid; feet black.

In the Catalogue of Birds Sharpe recognised *C. carbonaria* Sharpe as a larger race from New Guinea and the western islands (wing 6 ins. = 152 mm.), and *C. assimilis* Gray, a smaller race from the Aru Islands (wing 5·3-5·6 ins. = 134-141 mm.).

Among the birds from the western islands there is a specimen from Waigiu in which the wing is 162 mm., while that of the largest female from Misol attains 152 mm.

From the measurements given below it will be seen that though the birds from the Aru Islands are, on the average, slightly smaller than those from the mainland of New Guinea, and still more so than birds inhabiting the western islands of Waigiu, Misol, etc., they completely intergrade. I have therefore placed the southern New Guinea birds under the name *D. assimilis* Gray which has priority. I see no object in regarding this Drongo as a subspecies of *D. bracteatus* Gould from Australia: the differences seem well marked and of specific value.

Birds from South New Guinea.

	Wing in 19 males.	Wing in 8 females.
Wakatimi	140 mm.	135 mm.
	140	
	144	
Mimika River	144	142
	147	
	150	
Parimàu	143	137
	146	137
	149	145
	150	

	Wing in 19 males.	Wing in 8 females.
Kaparé River	152 mm.	
Wataikwa River	142	
	150	
	153	
Kamura River	152	
Launch Camp, Setakwa River	144	138 mm.
	144	144
	144	
	147	
Canoe Camp, Setakwa River		138

Birds from the Aru Islands.

	Wing in males.	Wing in females.
Silbattabatta, Aru Islands	135 mm.	131 mm.
	135	131
	139	135
	140	
Wokan, Aru Islands.....	137	
	138	
	141	137

"This Drongo was common everywhere and usually frequented the tops of the trees in pairs, darting out to catch passing insects. It has a harsh note."—*C. H. B. G.*

Chætorhynchus papuensis.

Chætorhynchus papuensis Meyer ; Sharpe, Cat. iii. p. 242 pl. xiii. (1877); Salvad. O. P. ii. p. 183 (1881); Roths. & Hartert, N. Z. x. p. 110 (1903), xx. p. 527 (1913).

a, b. ♂ ♀. Iwaka River, 28th Jan. & 8th Feb. 1911. [Nos. 224, 932, *C. H. B. G.*]

c-g. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 25th Nov. 1912–18th Jan. 1913. [*C. B. K.*]

Iris dark brown; bill black; feet black or dark sooty-purple.

The male seems to be rather larger than the female.

In two males the wings measure respectively 110 and 114 mm.; in five females, 103–108 mm.

In the British Museum there is a very large specimen with a wing measuring 124 mm. This bird, which was purchased from Messrs. Gerrard & Son, has no exact locality, but the back is so unusually glossy and purple that it may represent a distinct race.

"Several specimens of the small Papuan Drongo were seen, but only in the mountains. It has a loud call."—*C. H. B. G.*

Family ORIOLIDÆ.

Oriolus striatus.

Oriolus striatus Quoy & Gaim. ; Sharpe, Cat. iii. p. 210 (1877); Roths. & Hartert, N. Z. x. p. 111 (1903), xx. p. 526 (1913).

Mimeta striata Salvad. O. P. ii. p. 473 (1881).

a-e. ♂ ♀. Mouth of the Mimika River, 30th Nov. 1910–23rd March, 1911. [Nos. 23, 25, 151, 1183, 1246, *C. H. B. G.*]

f. ♀. Parimàn, Mimika River, 30th Aug. 1910. [No. 42, *C. H. B. G.*]

Iris red or reddish-orange; bill brown or reddish-brown; feet slate-blue or dark ash-colour.

"The Striped Oriole, though apparently a scarce bird inland, was by no means uncommon in the mangrove-swamps along the coast. It was always observed in pairs."—*C. H. B. G.*

**Oriolus sagittata magnirostris.*

Oriolus sagittata magnirostris van Oort, Notes, xxxii. p. 82 (1910).

The type is a *young* male from Merauke!

**Oriolus flavocinctus.*

Oriolus flavocinctus (King); van Oort, Notes, xxxii. p. 81 (1910).

Oriolus flavocinctus mülleri (Bonap.); Roths. & Hartert, N. Z. x. p. 111 (1903).

Four specimens are recorded from Merauke.

Family PLOCEIDÆ.

Munia tristissima.

Munia tristissima Wallace, P. Z. S. 1865, p. 479 (immature); Salvad. O. P. ii. p. 435 (1881); van Oort, p. 107 (1909); Roths. & Hartert, N. Z. xx. p. 520 (1913).

Uroloncha tristissima Sharpe, Cat. xiii. p. 364 (1890).

a, b. ♂. Wakatimi, Mimika River, 28th Feb. 1911. [Nos. 1051, 1052, *C. H. B. G.*]

The only example of this Weaver-Finch in the British Museum was the type-specimen, a quite young bird, procured by Wallace probably near Sorong. It has the plumage as described by Sharpe in the Catalogue: he has wrongly listed the bird as an adult, but in the synonymy he has rightly noted that it is immature. The sex of the type-specimen was not determined by Wallace, but Count Salvadori states that it is a female. These adult males form a valuable addition to the National Collection.

“Only once did I observe this little Weaver-Finch, when a small party of five were found feeding on some small black berries growing on a shrub at the back of our camp at Wakatimi. Two of them were shot; the others then took flight and were not seen again.”—*C. H. B. G.*

Family MOTACILLIDÆ.

Motacilla flava.

Motacilla flava Linn.; Sharpe, Cat. x. p. 516, pl. vi. figs. 3-5 (1885) [part.].

a, b. ♂ et ♂ imm. Mouth of the Mimika River, 3rd & 8th Dec. 1910. [Nos. 37, 73, *C. H. B. G.*]

c-f. ♂ ♀ imm. Wakatimi, Mimika River, 21st Nov. 1910, 1st Jan. & 7th March, 1911. [Nos. 1533, 1534, *G. C. S.*; 209 & 1117, *C. H. B. G.*]

The Eastern Asiatic race of the Yellow Wagtail has been separated by Dr. Hartert [*Vög. pal. Faun. i.* p. 289 (1905)] as *M. f. simillima*.

"I believe the Yellow Wagtail was plentiful around Wakatimi in November and December and frequented the open space cleared at the back of the permanent camp. When I visited this camp in March I saw only one on the same open ground."—*C. H. B. G.*

Motacilla boarula melanope.

Motacilla melanope Pall. ; Sharpe, Cat. x. p. 497 (1885).

Motacilla boarula melanope Hart. Vög. pal. Faun. i. p. 300 (1905); Roths. & Hartert, N. Z. xx. p. 519 (1913).

a-c. ♂ ♀ et ♂ imm. Parimau, Mimika River, 25th Dec. 1910–7th Jan. 1911. [Nos. 819, 839, 886, *C. H. B. G.*]

d. ♀. White Water Camp, Kaparé River, 400 ft., 25th Oct. 1910. [No. 369, *C. H. B. G.*]

e-g. ♂ ♀ et ♂ imm. Wataikwa River, 13th–21st Oct. 1910. [Nos. 1357, 1389, 1411, *G. C. S.*]

h-k. ♀ et o imm. Canoe Camp, Setakwa River, 8th Nov., 2nd Dec. 1912 & 7th March, 1913. [*C. B. K.*]

l. ♀. Camp 3, Utakwa River, 2500 ft., 6th Dec. 1912. [*C. B. K.*]

The eastern form of the Grey Wagtail has the tail shorter than the typical race. In three males the tail-measurement varies from 84–91 mm., and in seven females from 81–90 mm.

"Many examples of the Eastern Grey Wagtail were seen from about the beginning of October onwards. They frequented the stony beds of the large rivers and rocky mountain-torrents in the depths of the jungle. On the Kaparé River I saw three on one occasion, though usually the species was only met with singly."—*C. H. B. G.*

Anthus wollastoni.

Anthus wollastoni Ogilvie-Grant, Bull. B. O. C. xxxi. p. 105 (1913).

a. ♂. Camp 11, Utakwa River, 8000 ft., 6th Feb. 1913. [*C. B. K.*] (*Type of the species.*)

The adult male of this remarkable Pipit is most nearly

allied to *A. gutturalis* De Vis, from British New Guinea, but is easily distinguished by its finer bill and by lacking the blackish bands on the sides of the neck. The lores and superciliary stripes are pale rufous-buff, like the chin, throat, and underparts; the chest and breast, as well as the flanks, darker, and the feathers of the chest with a few blackish shaft-streaks. The outermost pair of tail-feathers have the outer web and an oblique portion of the inner web pale buff; the penultimate pair have a terminal wedge of the same colour, but of a more smoky tinge.

The axillary plumes are remarkably long, hair-like, and of a pale whitish-buff.

Total length ca. 175 mm.; wing 97; tail 77; tarsus 28.

The specimen was shot by one of the Dyak collectors, and we have, unfortunately, no further information regarding it.

Family MELIPHAGIDÆ.

Myzomela cruentata.

Myzomela cruentata Meyer, Sitzb. Ak. Wien, lxx. Abth. i. p. 202 (1874); Gould, Birds N. Guin. iii. pl. 71 (1877); Roths. & Hartert, N. Z. x. p. 222 (1903), xiv. p. 479 (1907), xx. p. 512 (1913).

a-c. ♂. White Water Camp, Kaparé River, 26th Oct.-10th Nov. 1910. [Nos. 373, 465, 467, *C. H. B. G.*]

d-f. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 15th & 17th Jan. 1913. [*C. B. K.*]

Iris deep brown; bill sooty-black; feet sooty-brown, soles yellowish.

"The Red-tinted Honey-eater was by no means plentiful, the three killed on the Kaparé River being shot in a large flowering-tree near my camp. Neither I nor the Dyaks could make out hens belonging to these male birds, though they were probably in the same tree."—*C. H. B. G.*

Myzomela eques nymani.

Myzomela eques (Less.); Salvad. O. P. ii. p. 301 (1881) [part.]; Gadow, Cat. ix. p. 141 (1884) [part.].

Myzomela eques nymani Roths. & Hartert, N. Z. x. p. 223 (1903), xiv. p. 479 (1907); xx. p. 512 (1913).

a. ♀. Wakatimi, Mimika River, 21st Nov. 1910. [No. 1535, *G. C. S.*]

b-d. ♂ ♀. Parimau, Mimika River, 1st Sept.-22nd Nov. 1910. [Nos. 81, 293, 549, *C. H. B. G.*]

e-k. ♂ ♀. White Water Camp, Kaparé River, 29th Oct.-10th Nov. 1910. [Nos. 380, 400, 412, 432, 471, 472, *C. H. B. G.*]

l. ♀. Kamura River, 16th Sept. 1910. [No. 1171, *G. C. S.*]

m. ♀. Wataikwa River, 8th Oct. 1910. [No. 1296, *G. C. S.*]

n. ♂. Iwaka River, 23rd Jan. 1911. [No. 904, *C. H. B. G.*]

The female differs from the male in its smaller size, also in the paler and browner colour of the underparts, and has been separated as *Cosmeteira mimima* Walden. (Type in the British Museum.)

Of the series in the present collection the measurements are:—6 males, wing 69–72 mm.; 7 females, 60–62 mm.

Messrs. Rothschild and Hartert have separated the specimens from Eastern New Guinea on account of their supposed greyer colour and wider gular patch, covering nearly the entire chin and throat. Our series agrees with specimens from Eastern New Guinea in having the throat-patch wider than in typical specimens of *M. eques* from Waigiu and from Salawatti, Misol, and the northern parts of New Guinea. The difference is, however, slight and does not seem to be quite constant.

“This Honey-eater was only found through the middle belt of the mountains and was nowhere seen where the following species occurs.

It has the call and habits of the other members of the genus, and was usually observed in pairs.”—*C. H. B. G.*

Myzomela erythrocephala infuscata.*Myzomela infuscata* Salvad. O. P. ii. p. 301 (1881).

a-f. ♂. Mouth of the Mimika River, 29th Nov.–10th Dec. 1910. [Nos. 18, 50, 58, 76, 77, 93, *C. H. B. G.*]

No female examples of this Honey-eater were procured; they closely resemble the female of *M. nigrita*, but may be distinguished by having the upperparts of a more olive-brown, especially on the lower back and rump.

“The Dyak, who collected this series in the mangrove-swamps on the coast, told me it was common there in November and December; but when I was camped there in the following March I did not meet with any.”—*C. H. B. G.*

Myzomela nigrita.

Myzomela nigrita Gray; Salvad. O. P. ii. p. 291 (1881); Gadow, Cat. ix. p. 139 (1884); Roths. & Hartert, N. Z. x. p. 221 (1903), xiv. p. 479 (1907), xx. p. 513 (1913).

a-d. ♂ ♀ et ♂ imm. White Water Camp, Kaparé River, 400 ft., 1st–9th Nov. 1910. [Nos. 414, 417, 457, 474, *C. H. B. G.*]

e. ♂. Iwaka River, 11th Feb. 1911. [No. 1027, *C. H. B. G.*]

f, g. ♂ et ♂ imm. Camp 3, Utakwa River, 2500 ft., 23rd Nov. 1912, & 18th Jan. 1913. [*C. B. K.*]

Iris deep brown; bill black, gape yellowish; feet dark ash-colour, soles yellowish.

The female of this species closely resembles the female of *M. infuscata* Salvadori, which also occurs in the Aru Islands, but the upperparts are browner, especially on the lower back and rump, and lack the olive tinge.

“The Black Honey-eater was apparently rather a scarce species, only seen in the mountains. The specimens obtained were all shot in flowering-trees, where they consorted with other allied species. In their actions and habits they resembled other members of the group.”—*C. H. B. G.*

Myzomela rosenbergi.

Myzomela rosenbergi Schleg. ; Gould, Birds N. Guinea, iii. pl. 70 (1879) ; Salvad. O. P. ii. p. 294 (1881) ; Gadow, Cat. ix. p. 137 (1884) ; Roths. & Hartert, N. Z. x. p. 220 (1903), xiv. p. 479 (1907), xx. p. 512 (1913).

a-k. ♂ ♀. White Water Camp, Kaparé River, 19th Oct.—1st Nov. 1910. [Nos. 332-4, 347-9, 379, 401, 402, 411, *C. H. B. G.*]

l-w. ♂ ♀ et ♂ ♀ imm. Iwaka River, 28th Jan.—11th Feb. 1911. [Nos. 942-6, 962, 969, 1002, 1003, 1028, 1028 A, 1028 B, *C. H. B. G.*]

x-x'. ♂ ♀ et ♂ ♀ imm. et juv. Camp 6 A, Utakwa River, 2900 ft., 12th-18th Jan. 1913. [*C. B. K.*]

y'-i². ♂ ♀ et ♂ imm. Camp 6 B, Utakwa River, 4200 ft., 24th Jan.—8th Feb. 1913. [*C. B. K.*]

k². ♂. Camp 6 C, Utakwa River, 5500 ft., 25th Feb. 1913. [*C. B. K.*]

l². ♂. Camp 9, Utakwa River, 5500 ft., 31st Jan. 1913. [*C. B. K.*]

Iris dark brown or brown ; bill black ; feet sooty-brown, soles yellow.

All phases of plumage are represented in this fine series.

One young male and three young females resemble the adult female, but have no red on the rump, and the tawny ends of the feathers of the mantle and wing-coverts are broader. Two other young males are similar, but have some red on the rump.

“Von Rosenberg’s Honey-eater was a common species in the mountains, frequenting, as a rule, the flowering-trees, where practically all the specimens were secured. In its habits, actions, and call it resembles the true Sun-birds.”—*C. H. B. G.*

Myzomela obscura.

Myzomela obscura Gould, P. Z. S. 1842, p. 136 [Port Essington].

Ptilotis fumata Bonap. Consp. Av. i. p. 392 (1850) [Utanata River, *ex Müller coll.*].

Myzomela obscura fumata Roths. & Hartert, N. Z. x.
p. 224 (1903).

Myzomela obscura apsleyi Mathews, Austral Av. Rec. i.
p. 48 (1912) [Melville Island].

a-m. ♂ ♀. Mouth of the Mimika River, 14th Nov. 1910–
23rd March, 1911. [Nos. 11, 14, 23, 63, 65, 166, 1170, 1173,
1211, 1234, 1259, 1260, *C. H. B. G.*]

Iris russet; bill sooty-black; feet dark ash-colour.

Birds inhabiting North Australia (viz. Northern Territory, Port Essington, Port Darwin, and Melville Island) resemble those from the Aru Islands and Southern Dutch New Guinea in having the underparts greyish-brown, not snuff-brown or dull rufous-brown as in the birds from Queensland and New South Wales. The North Australian form is typical *M. obscura* Gould, originally described from Port Essington, while the Queensland birds have been separated as *M. o. harterti* Mathews. That author has also separated the Melville Island birds, and states that they differ from *M. obscura* in their darker coloration; but our specimens from Melville Island differ in no way from those from Port Essington, the type-locality of *M. obscura*.

Dr. Gadow (Cat. ix. p. 129), in his 'Key to the Species' of *Myzomela*, says that the crown of *M. obscura* is only slightly tinged with red; but it should be noted that in exceptional cases only is the forehead tinged with dull crimson.

The wing measurements in *M. obscura* and *M. o. harterti* seem to be much the same. In the present series the measurements are:—6 males, wing 69–76 mm.; 6 females, wing 62–66 mm.

The specimen with the wing 76 mm. is an exceptionally large bird, the average wing-measurement in the male being about 71 mm.

"The Dusky Honey-eater was only met with in the mangrove-swamps along the coast, where it was uncommon and was usually observed in pairs."—*C. H. B. G.*

Gliciphila modesta.

Gliciphila modesta Gray ; Salvad. O. P. ii. p. 307 (1881) ; Galow, Cat. ix. p. 215 (1884).

Gliciphila modesta Roths. & Hartert, N. Z. x. p. 435 (1903) ; van Oort, p. 95 (1909).

Gliciphila modesta subfasciata Ramsay and *G. m. ramsayi* Mathews, N. Z. xviii. p. 400 (1912).

α-e. ♂ ♀. Mouth of the Mimika River, 8th & 10th Dec. 1910 and 21st & 22nd March, 1911. [Nos. 59, 61, 101, 1219, 1231, *C. H. B. G.*]

Iris hazel ; bill light brown ; feet flesh-colour or horn-colour.

The Dusky Honey-eater has the same distribution as *Ptilotis gracilis*, and ranges from Cape York to Southern New Guinea and from there to the Aru Islands, whence it was first described by G. R. Gray from a female specimen procured by Wallace.

Males are somewhat larger than females : the wing-measurements in four males varying from 66·5–68 mm., while one female measures 64 mm.

In addition to the difference in size due to sex, younger birds have the barring on the chest less pronounced. The brown colour of the upperparts is, as one would expect, darker in freshly moulted birds : thus, Nos. 59, 61, and 101, in worn plumage, killed in December, are conspicuously paler than Nos. 1219 and 1231, killed in March, in which most of the feathers of the back are freshly moulted.

G. m. ramsayi Mathews, from Cairns, N. Queensland, is said to be much larger (wing 71 mm.), darker above, and with the pectoral marking more pronounced. It seems to be merely a rather large adult male, in freshly moulted plumage.

“This little bird was only seen in the mangrove-swamps along the coast, and had much the same habits and appearance as a Warbler. A nest, which was suspended from a casuarina-tree some 8 ft. from the ground, is globular in shape, with the entrance on one side near the top. It is

composed entirely of dried broken vegetation and a few dead leaves."—*C. H. B. G.*

Conopophila albogularis.

Entomophila? albogularis Gould, B. Austr. iv. pl. 51 (1848); Gadow, Cat. ix. p. 219 (1884).

Conopophila albigularis Salvad. O. P. ii. p. 309 (1881).

a-p. ♂ ♀ et ♀ imm. Mouth of the Mimika River, 28th Nov. 1910–23rd March, 1911. [Nos. 1, 7, 10, 13, 16, 21, 104, 117, 124, 165, 1228, 1252, 1254, 1255, 1257, *C. H. B. G.*]

Iris hazel; bill ash-colour, tip and culmen darker; gape green; feet bluish-ash-colour.

A young female (No. 7) differs from the adult in having the crown light brown like the back, instead of grey; and in lacking the rufous band on the upper chest.

Among the series from the mouth of the Mimika listed above, those killed in November and December are in worn plumage, while others obtained at the end of March are in fresh plumage. On the whole, they seem to be rather paler brown above than typical specimens of *C. albogularis* from Port Essington, and the rufous band across the upper chest is not so rich. In this respect, however, a specimen from South-east New Guinea, presented to the British Museum by Captain F. R. Barton, is quite similar to specimens from Port Essington, and is only slightly paler brown above. It does not therefore seem advisable to separate the birds from Dutch New Guinea. The extent of the rufous on the chest is much exaggerated in Gould's figure.

"The White-throated Honey-eater was only observed in the mangrove-swamps on the coast. Its habits and actions were much like those of a Warbler."—*C. H. B. G.*

Glycichæra fallax.

Glycyphila fallax (Salvad.); Gadow, Cat. ix. p. 213 (1884).

Glycichæra fallax Salvad. O. P. ii. p. 310 (1881); Roths. & Hartert, N. Z. x. p. 435 (1903), xiv. p. 480 (1907).

a. ♂. Wakatimi, Mimika River, 9th March, 1911.
[No. 1130, *C. H. B. G.*]

b, c. ♂ ♀. White Water Camp, Kaparé River, 6th Nov. 1910. [Nos. 448, 449, *C. H. B. G.*]

Iris white or pale yellowish-white; bill and feet ash-colour, gape yellow.

The British Museum has recently received three typical examples of this species from Silbattabatta, Aru Islands, collected by Mr. Walter Goodfellow. These are quite similar to the birds from the Mimika and Kaparé Rivers listed above. The species has been recorded from round Geelvink Bay and on the north coast as far as Friedrich Wilhelmshafen.

"This Puff-backed Honey-eater was probably less scarce than appeared to be the case, as it was no doubt generally mistaken for *Melilestes iliolophus*, which it closely resembles in its general appearance and habits."—*C. H. B. G.*

Edistoma pygmæum.

Edistoma pygmæum Salvad. O. P. ii. p. 312 (1881); Gadow, Cat. ix. p. 293 (1884); Roths. & Hartert, N. Z. x. p. 436 (1903), xx. p. 513 (1913).

a. ♀. Mouth of the Mimika River, 16th March, 1911.
[No. 1176, *C. H. B. G.*]

Iris brown; bill and legs blackish.

The British Museum possessed three examples of the Pygmy Honey-eater, collected by A. S. Meek on the Aroa River, South-east New Guinea. The same collector also met with it on the Setakwa River.

Melilestes megarhynchus.

Ptilotis megarhynchus Gray, P. Z. S. 1858, p. 174 [Aru Is. Male immature.]

Ptilotis megalorhynchus Gadow, Cat. ix. p. 248, pl. v. (1884).

Melilestes megarhynchus Salvad. O. P. ii. p. 313 (1881); Roths. & Hartert, N. Z. x. p. 436 (1903), xiv. p. 481 (1907), xx. p. 513 (1913); van Oort, p. 95 (1909).

a. ♀. Upper Mimika River, 10th Feb. 1910. [No. 1043, *G. C. S.*]

b-g. ♂ ♀ et ♂ imm. Parimàu, Mimika River, 28th Aug.-10th Nov. 1910. [Nos. 33, 221, 259, 286, 505, *C. H. B. G.*; 1494, *G. C. S.*]

h-m. ♂ ♀ et ♀ imm. White Water Camp, Kaparé River, 500-1500 ft., 17th-31st Oct. 1910. [Nos. 319, 338, 383, 405, 406, *C. H. B. G.*]

n-p. ♀ et ♂ imm. Wataikwa River, 20th Sept.-21st Oct. 1910. [Nos. 1203, 1368, 1415, *G. C. S.*]

q. ♂. Iwaka River, 28th Jan. 1911. [No. 949, *C. H. B. G.*]

r. ♀. Launch Camp, Setakwa River, 15th Oct. 1912. [*C. B. K.*]

s, t. ♂ ♀. Canoe Camp, Setakwa River, 19th & 30th Nov. 1912. [*C. B. K.*]

u-w. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 23rd Dec. 1912-11th Jan. 1913. [*C. B. K.*]

x, y. ♂ et ♂ juv. Camp 6 A, Utakwa River, 2900 ft., 11th & 18th Jan. 1913. [*C. B. K.*]

Adult. Iris orange; bill sooty-brown or black; feet bluish-ash-colour, or bluish-slate-colour.

Younger birds, such as Nos. 1368, 1415, and 1494, have a ring of pale sulphur-yellow plumes round the eye, and the throat and underparts still partially streaked with the same colour. The type-specimen is in the British Museum, and is quite a young bird procured by Wallace in the Aru Islands. This species is widely distributed in New Guinea but, as Dr. van Oort has indicated, the form found in Waigiü is rather greyer on the head and neck, and may be separated as *M. m. vagans* (Bernstein).

In the plate of this species given in the 'Catalogue of Birds,' the head and neck are much too grey.

A nestling (specimen *y*) resembles the older birds described above, but the light portions of the feathers on the chin, throat, and middle of the breast are whitish instead of pale sulphur-yellow. The bill is comparatively short, 30 mm. as compared with about 45 mm. in the adult male.

"In life this species was easily mistaken for *Ptilotis saturator*, though at close quarters the differences were apparent."—*C. H. B. G.*

***Melilestes poliopterus*.**

Melilestes poliopterus Sharpe, J. Linn. Soc., Zool. xvi. pp. 318, 438 (1882) [Astrolabe Mts.]; Roths. & Hartert, N. Z. x. p. 437 (1903), xiv. p. 481 (1907).

Arachnothera polioptera Gadow, Cat. ix. p. 111, pl. i. fig. 1 (1884).

a. ♂. White Water Camp, Kaparé River, 600 ft., 25th Oct. 1910. [No. 368, *C. H. B. G.*]

b. ♂. Iwaka River, 11th Feb. 1911. [No. 1026, *C. H. B. G.*]

c, d. ♂. Camp 6 A, Utakwa River, 2900 ft., 7th & 15th Jan. 1913. [*C. B. K.*]

e. ♀. Camp 6 A, Utakwa River, 4200 ft., 22nd Feb. 1913. [*C. B. K.*]

f. ♀. Camp 6 C, Utakwa River, 5500 ft., 23rd Feb. 1913. [*C. B. K.*]

g. ♀. Camp 9, Utakwa River, 5500 ft., 4th Feb. 1913. [*C. B. K.*]

Iris sienna-brown ♂, or umber-brown ♀; bill black; gape yellow; feet ash-colour or dark slate-colour.

The males have wing-measurements of 67–71 mm. as compared with 60–63 in the females.

****Melilestes novæguineæ flaviventris*.**

Melilestes novæguineæ flaviventris Roths. & Hartert, N. Z. x. p. 437 (1903) [part.], xx. p. 513 (1913).

Messrs. Rothschild and Hartert have recorded examples of this yellow-breasted form of *M. novæguineæ* collected by A. S. Meek in the Utakwa Valley, 2000–3000 ft., and also on the upper Island River. The type locality of *M. n. flaviventris* is the Aru Islands and, in addition to those collected there by Wallace, the British Museum has recently received three specimens from Silbattabatta. All these have the underparts mostly sulphur-yellow, and are very distinct

from the yellowish-olive breasted examples of *M. novæ-guinæ* from Waigiu, Misol, and North-west New Guinea.

Melilestes chloreus Reichenow, J. f. O. 1915, p. 126 [Sepik District] is no doubt a synonym of *M. novæguinæ*. It is described as much larger: the wing-measurement shows an increase of 2·5 mm.!

***Melilestes iliolophus*.**

Melilestes iliolophus Salvad. O. P. ii. p. 316 (1881); Roths. & Hartert, N. Z. x. p. 438 (1903), xiv. p. 481 (1907), xx. p. 513 (1913).

Arachnothera iliolophus Gadow, Cat. ix. p. 111, pl. i. fig. 2 (1884).

a, b. ♂. Wakatimi, Mimika River, 8th & 10th March, 1911. [Nos. 1120, 1137, *C. H. B. G.*]

c-f. ♂. Parimau, Mimika River, 12th Nov.—25th Dec. 1910. [Nos. 781, 828, *C. H. B. G.*; 1504, 1521, *G. C. S.*]

g-r. ♂ ♀. White Water Camp, Kaparé River, 15th Oct.—4th Nov. 1910. [Nos. 311, 314, 324, 346, 387, 397, 418, 421, 436, 475, 476, *C. H. B. G.*]

s. ♂. Iwaka River, 31st Jan. 1911. [No. 971, *C. H. B. G.*]

t. ♂. Launch Camp, Setakwa River, 17th Oct. 1912. [*C. B. K.*]

u. ♂. Camp 3, Utakwa River, 2500 ft., 18th Dec. 1912. [*C. B. K.*]

v, w. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 14th & 15th Jan. 1913. [*C. B. K.*]

Iris russet; eyelid greenish-yellow; bill black; underside of lower mandible lilac; gape yellow; feet bluish-slate-colour.

The above series seems to agree well with typical examples from Miosnom Island in Geelvink Bay.

“The habits of the Long-plumed Honey-eater are similar to those of the true Sun-birds, and it has the same straight and swift flight. It is usually met with in pairs, and its call is a short sharp note.”—*C. H. B. G.*

Melipotēs fumigatus goliathi.

Melipotēs gymnops goliathi Roths. & Hartert, N. Z. xx. p. 515 (1913) [Mt. Goliath].

a. ♂ imm. Iwaka River, 6th Feb. 1911. [No. 999, C. H. B. G.]

b. ♂. Camp 6 A, Utakwa River, 2900 ft., 7th Jan. 1913. [C. B. K.]

c-f. ♂. Camp 6 B, Utakwa River, 4200 ft., 30th Jan.-22nd Feb. 1913. [C. B. K.]

g-k. ♂ ♀. Camp 6 C, Utakwa River, 5500 ft., 17th-25th Feb. 1913. [C. B. K.]

l-p. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 25th-31st Jan. 1913. [C. B. K.]

q, r. ♂ ♀. Camp 11, Utakwa River, 8000 ft., 6th Feb. 1913. [C. B. K.]

Iris pale brown ; orbital skin gamboge ; bill black ; feet lavender-grey or black.

This is a rather darker form of *M. fumigatus* Meyer, from the mountains of South-east New Guinea. The authors in describing this form consider it to be a subspecies of *M. gymnops* Sclater (P. Z. S. 1873, p. 695, pl. lvii.), but the latter is a totally different bird specifically, though it certainly belongs to the same genus. This is another instance of the present mania for regarding every form, however distinct, as a subspecies of something else.

The figure of *M. fumigatus* given by Meyer [Zeitschr. ges. Orn. iii. p. 22, pl. iv. fig. 2 (1886)] is not very accurate, the mottling of the underparts being barely indicated.

This subspecies is new to the British Museum.

Melidectes torquatus.

Melidectes torquatus Sclater, P. Z. S. 1873, p. 694, pl. lv.; Gould, B. New Guinea, iii. pl. 36 (1887); Salvad. O. P. ii. p. 319 (1881); Roths. & Hartert, N. Z. x. p. 439 (1903).

a, b. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 13th & 20th Jan. 1913. [C. B. K.]

This fine species of Honey-eater is new to the British Museum collection, though its ally, *M. t. emilii* Meyer, from South-east New Guinea, is well represented (*cf.* Gould, t. c. pl. 37).

In the figure of the type from Arfak given by Selater, the under tail-coverts and thighs are shown as cinnamon-rufous, but no mention is made of these points in the description, nor are they so coloured in Gould's figures of typical examples from Atam. In the Utakwa specimens the under tail-coverts are sooty-black in the middle, widely edged on the sides with whitish, like the flanks, and the thighs are brown. The cinnamon colour in the figure of the type-specimen is no doubt a mistake on the part of the artist.

****Melirrhophetes nouhuysi*.**

Melirrhophetes nouhuysi van Oort, Notes, xxxii. p. 215 (1910) ["Orange Mts," 3800 m.]

This species appears to be most nearly allied to *M. fuscus*, but it is larger, has no bare skin behind the eye, and has green margins to the wing- and tail-feathers. One female was procured on the Snow Mountains at an elevation of about 12,500 ft.

***Melirrhophetes fuscus*.**

Acanthochæra fusca De Vis, Ibis, 1897, p. 383 [Mt. Scratchley, 12,200 ft.]; id. Rep. Brit. New Guinea, 1896-7 (Birds), p. 86 (1898); Hartert, N. Z. iv. p. 369 (1897).

Melirrhophetes fusca Roths. & Hartert, N. Z. x. p. 440 (1903).

a. Head only. Mt. Carstensz, 11,000 ft., 31st Jan. 1913. [C. B. K.]

Only the head of this interesting Honey-eater could be preserved, as the bird had been much damaged by shot; but it seems undoubtedly referable to this alpine species, which was represented in the British Museum by two examples from the Owen Stanley Range.

Eyelid bluish-white; postorbital skin orange; bill black; feet bluish-white.

Melirrhophetes ochromelas batesi.

Melirrhophetes batesi Sharpe; id. in Gould's Birds New Guinea, iii. pl. 35 (1886).

Melirrhophetes ochromelas batesi Roths. & Hartert, N. Z. x. p. 440 (1903).

a. Imm. Camp 6 A, Utakwa River, 2900 ft., 20th Jan. 1913. [C. B. K.]

b. ♂. Camp 6 B, Utakwa River, 4200 ft., 24th Jan. 1913. [C. B. K.]

c. ♂. Camp 6 C, Utakwa River, 5500 ft., 17th Feb. 1913. [C. B. K.]

I agree with Messrs. Rothschild & Hartert (*op. cit.*) that it is extremely doubtful if *M. o. batesi* can be maintained and is really separable from typical *M. ochromelas* Meyer, from Arfak. No examples of the latter are available for comparison, and I am therefore unable to decide with certainty. Specimens from Utakwa, and others from South-east New Guinea, seem to be indistinguishable from the figure of the type of *M. ochromelas* given by Sharpe in Gould's 'Birds of New Guinea,' pl. 34 (1877).

Melirrhophetes belfordi.

Melirrhophetes belfordi De Vis, Rep. Brit. New Guinea, 1889, Birds, p. 3 (1890) [Mt. Knutsford]; Hartert, N. Z. iv. p. 369 (1897); Roths. & Hartert, N. Z. x. p. 440 (1903), xiv. p. 481 (1907).

a. ♂. Camp 6 B, Utakwa River, 4200 ft., 3rd Feb. 1913. [C. B. K.]

b-d. ♂ ♀. Camp 6 C, Utakwa River, 5500 ft., 19th & 20th Feb. 1913. [C. B. K.]

e-l. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 26th Jan.-4th Feb. 1913. [C. B. K.]

m. ♂. Camp 11, Utakwa River, 8000 ft., 9th Feb. 1913. [C. B. K.]

Messrs. Rothschild & Hartert [*cf.* N. Z. xx. p. 514 (1913)] have separated the birds collected by A. S. Meek on Mount Goliath as *M. b. griseirostris* on account of their smaller size and pale slaty-blue bill.

In none of the twelve specimens listed above has the colours of the soft-parts been recorded, so I am unable to state the colour of the bill in life, but in the dried skins it appears in all cases to have been black, as in typical *M. belfordi*.

As regards size, the wing-measurement in males varies a good deal individually: eight males vary from 130–137 mm., and one female measures 120 mm.

In *M. belfordi* the wing seems to be rather longer, five examples vary from 133–146 mm.; in only two of these, however, has the sex been marked male by Mr. Goodfellow, their measurements being respectively 135 and 142 mm. Possibly the specimen measuring 133 mm. may be a female.

I cannot separate these birds from typical *M. belfordi*.

****Melirrhophetes belfordi griseirostris*.**

Melirrhophetes belfordi griseirostris Roths. & Hartert, N. Z. xx. p. 514 (1913).

A smaller race with pale slaty-blue bill, procured on Mount Goliath by A. S. Meek. (See above remarks under *M. belfordi*.)

Among the numerous species of Honey-eaters found in New Guinea and the adjacent islands there are several very similar in outward appearance which have been the cause of much confusion. These may be naturally divided into four groups:—

1. *Ptilotis analoga* (Reichenb.). New Guinea coastal districts and adjacent islands.
P. a. longirostris O.-Grant. Wamma, Aru Islands.
P. a. vicina Roths. & Hartert. Sudest Is.
P. a. montana Salvad. Mountains of Arfak and apparently North-east New Guinea.
2. *Ptilotis gracilis* Gould. North Queensland, Aru Islands, and Southern Dutch New Guinea.

3. *Ptilotis aruensis* Sharpe. Aru Islands and Southern Dutch New Guinea.

P. a. sharpei Roths. & Hartert. Waigiu, Salawatti, Misol, Arfak, Jobi, Fergusson I., and Goodenough I.

4. *Ptilotis notata* Gould. North Queensland.

P. n. orientalis Meyer. British New Guinea to Southern Dutch New Guinea.

P. n. mimikæ O.-Grant. Southern Dutch New Guinea to British New Guinea (Upper Aroa River).

***Ptilotis analoga*.**

Ptilotis analoga Reichenb.; Roths. & Hartert, N. Z. x. p. 441 (1903) [West coast of New Guinea]; van Oort, p. 96 (1909); Roths. & Hartert, N. Z. xx. p. 517 (1913).

Ptilotis flavirictus Salvad. (=Young of *P. analoga* fide Hartert: type examined).

Ptilotis similis Jacq. et Pucher. Voyage Pôle Sud, iii. Zool. p. 89, Atl. pl. 17. fig. 2 (1853). [Another name given to the type-specimen of *P. analoga* Reichenb.]

a. ♂. Wakatimi, Mimika River, 28th Dec. 1910. [No. 195, *C. H. B. G.*]

b-g. ♂ ♀ et ♂ ♀ imm. Parimau, Mimika River, 27th Aug.-28th Nov. 1910. [Nos. 26, 61, 77, 168, 581, 607, *C. H. B. G.*]

h-k. ♂ ♀ et ♂ imm. White Water Camp, Kaparé River, 31st Oct.-4th Nov. 1910. [Nos. 396, 429, 444, *C. H. B. G.*]

l. ♀. Launch Camp, Setakwa River, 9th Oct. 1912. [*C. B. K.*]

m, n. ♂. Canoe Camp, Setakwa River, 12th & 27th Nov. 1912. [*C. B. K.*]

o, p. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 12th & 14th Jan. 1913. [*C. B. K.*]

Iris raw-sienna; bill black; gape yellow; feet olive-green or ash-colour.

This species has a wide range in the coastal districts of New Guinea, and extends to the adjacent islands of Salawatti and

Aru, as is shown by the specimens in the British Museum. It is easily distinguished from *P. gracilis* Gould by its stouter bill and by having the rump-feathers elongate, forming a dense cushion of olive-green, uniform in colour with the back, the longest feathers being fringed with whitish and often forming a more or less distinct crescentic band across the base of the tail. The underparts are not distinctly spotted as in the *P. notata* group.

Males are perhaps a little larger than females :—

12 males.		10 females.	
Wing.	Tail.	Wing.	Tail.
77-86 mm.	63-73 mm.	71-82.5 mm.	58-70 mm.

"This Honey-eater is probably less plentiful than *P. n. mimika*, but it cannot be distinguished from that bird in life and has exactly the same habits."—*C. H. B. G.*

Dr. Hartert is right in stating that my *Ptilotis longirostris* [*cf.* Bull. B. O. C. xxix. p. 27 (1911), Island of Wamma], should have been compared with *P. analoga* and not with *P. aruensis*, but I cannot agree with him that it is merely a long-billed individual of the former species. There is no proof that this is the case, and no other specimens from the island of Wamma are available for comparison. The bill measures 26 mm. as compared with 23 mm. in the longest example of *P. analoga* in the British Museum. Until it is proved that the shorter-billed *P. analoga* also occurs on Wamma, this long-billed form must rank as a distinct subspecies [*cf.* Hartert, N. Z. xx. p. 519 (1913)].

P. analoga vicina Roths. & Hartert [N. Z. xix. p. 203 (1912)], from Sudest Island, is a very closely allied race, with the forehead greyish instead of olive and the underparts perhaps somewhat paler.

Ptilotis albonotata.

Ptilotis albonotata Salvad. O. P. ii. p. 333 (1881).

a. ♂. Mimika River, 11th April, 1910. [No. 1126, *C. H. B. G.*]

b, ♂. Parimâu, Mimika River, 31st Aug. 1910. [No. 65, *C. H. B. G.*]

c, ♂. Wataikwa River, 1st Oct. 1910. [No. 1290, *G. C. S.*]

Iris dark brown; bill black; feet slate- or ash-colour.

These three examples are referable to this species or variety. They resemble *P. analoga*, but the auricular spots are white. Dr. Hartert is of opinion that this is merely a colour-variation of *P. analoga* [*cf.* N. Z. xx. p. 518 (1913)], and this may be the case.

In three males the wings measure respectively 82·5, 85·5, and 86 mm.

"This White-eared Honey-eater was not distinguishable from *P. analoga* in life. The Dyaks and I kept a sharp look out for it, but though we examined large numbers of *P. analoga* or *P. n. mimikæ* at very close quarters we could not find any which had not yellow ear-patches."—*C. H. B. G.*

P. a. montana Salvad. [O. P. ii. p. 333 (1881)], which also has white or very pale yellowish-white auricular spots, is easily recognised by its darker, browner upperparts and by the brown-olive margins to the outer webs of the primary quills and tail-feathers, which in *P. albonotata* are bright olive-green. The size of the two birds is about the same; the wing in two males measures respectively 82 and 89 mm., in one female 87 mm.

P. a. montana was described from the Arfak Mountains, and has been obtained to the east of Geelvink Bay, in the Sattelberg range, North-east New Guinea, and on the Aicora River, North-east British New Guinea.

Ptilotis gracilis.

Ptilotis gracilis Gould; Ogilvie-Grant, Bull. B. O. C. xxix. p. 28 (1911).

Ptilotis analoga an subsp.? van Oort, p. 96 (1909).

Ptilotis (analoga?) gracilis Hartert, N. Z. xx. p. 519 (1913).

α, b. ♂, ♀. Mouth of the Mimika River, 16th & 20th March, 1911. [Nos. 1182, 1205, *C. H. B. G.*]

Iris brown; bill black; gape yellow; feet ash-colour.

This slender-billed species of Honey-eater has the feathers of the rump coloured as in *P. analoga*, but though somewhat lengthened they are not nearly so dense. The general colour of the upperparts, moreover, is greyish-olive-green, becoming somewhat greyer on the rump and upper tail-coverts. In *P. analoga* these parts are olive-green, like the back.

As already pointed out by myself (*op. cit.*), this small and paler species, which was originally described from Cape York district (type in the British Museum), also occurs in the Aru Islands and in Southern New Guinea side by side with the larger and more brightly coloured form *P. analoga*. Dr. Hartert has suggested that the birds from New Guinea and Aru may be small female examples of *P. analoga*, but this cannot be the case, as is shown by the distinguishing characters mentioned above, especially the feathering of the rump and greyish-olive colour of the upperparts.

The male is generally rather larger than the female, and has the tail distinctly longer.

4 males.		4 females.	
Wing.	Tail.	Wing.	Tail.
68-76 mm.	56-63 mm.	67-73 mm.	51-54 mm.

The British Museum possesses three examples of this species from Silbattabatta, in the Aru Islands, collected by Mr. W. Goodfellow; also two examples of *P. analoga*, the latter being readily recognised by their olive-green upper parts and densely feathered rumps.

"Two were shot in the mangrove-swamps on the coast where *P. analoga* was not seen."—*C. H. B. G.*

Ptilotis aruensis.

Ptilotis aruensis Sharpe, Rep. Zool. Coll. 'Alert,' p. 19 (1884) [Aru Islands]; Roths. & Hartert, N. Z. x. p. 442 (1903), xx. p. 516 (1913).

Ptilotis flavirictus van Oort (nec Salvad.), p. 96 (1909).

a. ♂. Parimau, Mimika River, 19th Dec. 1910. [No. 767, *C. H. B. G.*]

b, c. ♀. Launch Camp, Setakwa River, 29th & 30th Oct. 1912. [A. F. R. W.]

d. ♀. Canoe Camp, Setakwa River, 28th Nov. 1912. [C. B. K.]

This species and its ally *P. a. sharpei* are easily recognised from those already mentioned by the following characters. The elongate rump-feathers form a very dense cushion, and are dark *smoky-brown*, the longer upper ones being *tipped with olive-green*, and the shorter under ones with silvery white, which is concealed till the upper feathers are raised. It will thus be seen that *P. aruensis* is a very distinct form. It has the auricular tuft of pale sulphur-yellow feathers short and rounded posteriorly, while in the allied form, *P. a. sharpei*, the tuft is much brighter yellow and the feathers are considerably lengthened posteriorly.

Ptilotis notata mimikæ.

Ptilotis? Roths. & Hartert, N. Z. xiv. p. 482 (1907) [Aroa River, 4000-6000 ft.].

Ptilotis mimikæ Ogilvie-Grant, Bull. B. O. C. xxix. p. 27 (1911) [Mimika River]; Roths. & Hartert, N. Z. xx. p. 517 (1913).

a. ♂. Upper Mimika River, 16th Feb. 1910. [No. 1064, G. C. S.] (♂ *Type of the subspecies.*)

b-i. ♂ ♀ et ♀ imm. White Water Camp, Kaparé River, 30th Oct.-10th Nov. 1910. [Nos. 393, 398, 399, 440-2, 469, 470, C. H. B. G.]

k-m. ♂ ♀ et imm. Wataikwa River, 25th Sept.-6th Oct. 1910. [Nos. 1246, 1291, 1310, G. C. S.]

n-q. ♂ ♀. Iwaka River, 24th Jan.-5th Feb. 1911. [Nos. 908, 976*, 992, 993, C. H. B. G.] (* ♀ *Type of the species.*)

r. ♂ imm. Launch Camp, Setakwa River, 14th Oct. 1912. [C. B. K.]

s. ♂. Canoe Camp, Setakwa River, 25th Nov. 1912. [C. B. K.]

t-v. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 23rd Dec. 1912-9th Jan. 1913. [C. B. K.]

Iris dark brown ; bill black ; gape yellow ; feet ash-colour or bluish-slate-colour.

Ptilotis notata Gould from Cape York (type in the British Museum) and its two New Guinea subspecies form a well-marked group characterised by having the underparts of the body indistinctly spotted or mottled.

The larger thick-billed form of Spot-breasted Honey-eater (*P. n. mimikæ*) inhabits the lower ground and occurs from sea-level up to 2500 ft., above which its place is taken by the smaller slender-billed form, *P. n. orientalis* Meyer.

P. notata (with its New Guinea allies here mentioned) is of course a perfectly distinct species from *P. analoga*, and Messrs. Rothschild and Hartert, by stating that "*Ptilotis analoga orientalis* is clearly a subspecies of *P. analoga*," have merely confused matters, for both *P. n. mimikæ* and *P. n. orientalis* occur side by side with *P. analoga*, and these spot-breasted birds really represent a different section of the genus.

The description of this thick-billed form is as follows:—

Adult. Most nearly allied to *P. n. orientalis*, from the higher ground (3000–7000 ft.), and with the same mottled underparts ; but larger, and with a shorter and stouter bill.

♂. Culmen 20·5 mm.; wing 82–91; tail 71.

♀. Culmen 19 mm.; wing 78–85; tail 70.

There is a single example of this subspecies in the Tring Museum from the headwaters of the Aroa River, in Southern British New Guinea, in which the wing-measurement reaches 95 mm. This is an unusually large example, but seems to differ in no way from the type.

"This Spot-breasted Honey-eater was one of the commonest birds everywhere, although not observed near Wakatimi. It was seen both singly and in pairs in the creepers and parasitic plants on the trees, in the undergrowth and on the ground, diligently searching for food, after the manner of a Wren or Tree-creeper. As a rule it was very tame, and took little notice of an intruder.

"In company with other Honey-eaters and Sun-birds it

frequented a large flowering-tree close to my camp on the Kaparé River.

"It has a sharp call-note and is a very active bird."—*C. H. B. G.*

Ptilotis notata orientalis.

Ptilotis analoga orientalis (Meyer); Roths. & Hartert, N. Z. x. p. 441 (1903).

Ptilotis orientalis Roths. & Hartert, N. Z. xx. p. 518 (1913).

a, b. ♀. Camp 6 A, Utakwa River, 2900 ft., 9th & 18th Jan. 1913. [*C. B. K.*]

c, d. ♂. Camp 6 B, Utakwa River, 4200 ft., 27th & 30th Jan. 1913. [*C. B. K.*]

The smaller slender-billed form of the Spot-breasted Honey-eater inhabits the higher ground, ranging from about 3000 ft. upwards to at least 7000 ft. It is new to the British Museum.

Dr. Hartert has recorded it from the Utakwa Valley (not Snow Mountains as stated), 3000 ft., and is of opinion that the two forms occur side by side, but this does not seem to be the case. He also records its occurrence on the upper Aroa River, Mount Cameron, 7000 ft., and Mount Gayata, Richardson range.

The male is rather larger than the female.

In eight males the wing measures from 72–76 mm.; in eight females, 69–72 mm.

Ptilotis diops.

Ptilotis diops Salvad., Ann. Mus. Civ. Genov. xxxix. p. 581 (1899) [Purari River, Southern British New Guinea]; Roths. & Hartert, N. Z. xx. p. 515 (1913).

a-c. ♂ ♀. Mimika River, 23rd Feb., 29th April, 23rd May, 1910. [Nos. 1087, 1138, 1163, *G. C. S.*]

d-k. ♂ ♀ et ♂ imm. Parimau, Mimika River, 30th Aug.–19th Dec. 1910. [Nos. 48, 59, 62, 497, 514, 766, *C. H. B. G.*; & 1485, *G. C. S.*]

l-p. White Water Camp, Kaparé River, 31st Oct.–3rd Nov. 1910. [Nos. 407, 409, 410, 415, 435, *C. H. B. G.*]

g, r. ♂ ♀. Wataikwa River, Aug. & 20th Sept. 1910.
[W. G. & No. 1204, G. C. S.]

s. ♂. Canoe Camp, Setakwa River, 14th Nov. 1912.
[C. B. K.]

t. ♂. Camp 3, Utakwa River, 2500 ft., 21st Nov. 1912.
[C. B. K.]

Iris raw-sienna or dark brown; bill black; feet slate-colour or bluish.

The British Museum possessed a single female example of this distinct species from the Mambare River, presented by Mr. C. A. W. Monckton. In the Tring Museum there is a specimen from the Aicora River, near the frontier of British New Guinea, and a pair collected by A. S. Meek on the Setakwa. Our birds agree well with the original description and with the specimen from the Mambare River.

A young male (No. 714) differs from the adult in having the crown and back uniform olive, without any trace of dark middles to the feathers, and the rump and upper tail-coverts brownish, as is the case with most young birds of this genus.

The males are rather larger than the females.

9 males.

8 females.

Wing 88-95 mm.

Wing 82-85 mm.

Xanthotis chlorolæma Reichenow, J. f. O. 1915, p. 127 [Sepik District] is almost certainly referable to this species described from British New Guinea.

A nest with two eggs was taken at Parimau on the 31st of August, 1910, and the female parent (No. 59) was secured.

The eggs are of an ordinary oval shape, one being rather longer and more pointed at the smaller end than the other, smooth and slightly glossy. The ground is pinkish-white with a few small scattered spots and markings of pale reddish-brown of two shades, most numerous round the larger end. They measure respectively 23×16 and 22×16 mm.

"The Yellow-throated Honey-eater was quite as plentiful as *P. n. mimikæ*, from which it could only be distinguished by its rather larger size and at close quarters by its yellow and white ears. It has the same habits as *P. n. mimikæ*,



1

2

MENPES PRESS, WATFORD

1. PTILOTIS SALVADORII UTAKWENSIS. ♂
2. PYCNOPYGIUS STICTOCEPHALUS. ♀

and like that bird some were shot in company with other species of Honey-eaters and Sun-birds in large flowering-trees feasting on the nectar from the flowers.

"A nest taken at Parimau was cup-shaped and composed of moss and dry twigs, lined with a finer brown material. It was suspended between the horizontal fork of a shrub, only some six inches above the ground."—*C. H. B. G.*

Ptilotis salvadorii utakwensis, subsp. n. (Pl. II. fig. 1.)

Adult male and female. Closely allied to *P. salvadorii* Hartert (= *P. lucrimans* De Vis, Ibis, 1897, p. 382), from the Owen Stanley Mountains; but altogether more olive both above and below. The upperparts, including the crown, are mostly olive-green, the dark middles of the feathers being much reduced in size in comparison with those of *P. salvadorii*, and the breast and belly mostly greenish-olive instead of dark brownish-olive. From *P. subfrenata* Salvad. it seems to differ in various points, the forehead being olive and the malar stripe black, whereas in the Arfak bird these parts are grey.

2 males: wing 94, 95 mm.; tail 85, 91 mm.

2 females: wing 88, 91 mm.; tail 84, 84 mm.

The colours of the soft parts have not been recorded.

a, b. ♂ ♀. Camp 6 c, Utakwa River, 5500 ft., 18th & 19th Feb. 1913. [*C. B. K.*]

c, d. ♂ ♀. Camp 11, Utakwa River, 8000 ft., 19th Feb. 1913. [*C. B. K.*] (*Types of the subspecies.*)

The specimen figured is "*c*," the ♂ type of the subspecies.

Xanthotis melanolaema Reichenow, J. f. O. 1915, p. 127 [Sepik District] is almost certainly synonymous with *Ptilotis salvadorii* Hartert.

Ptilotis ixoides.

Ptilotis ixoides Salvad. O. P. ii. p. 339 (1881) [Sorong].

a, b. ♂. Upper Mimika River, 23rd Feb. 1910. [*W. G.* & No. 1086, *G. C. S.*]

c-i. ♂ ♀. Parimau, Mimika River, 1st Sept.–29th Nov. 1910. [Nos. 76, 174, 191, 494, 495, 591, 612, *C. H. B. G.*]

k. ♀. White Water Camp, Kaparé River, 1500 ft., 8th Nov. 1910. [No. 454, *C. H. B. G.*]

Iris hazel ; bill blackish-brown, or very dark ash-colour ; feet bluish-slate or dark ash-colour.

The specimens listed above agree well with the description of this species, the type of which from Sorong is in the Leyden Museum. The species is new to the British Museum, and is not represented in the Tring Museum. Dr. Hartert has kindly sent me the allied *P. finschi* Roths. & Hartert for comparison, but the latter, from North-east New Guinea, is altogether more rufous, especially on the underparts.

Ptilotis simplex Reichenow, J. f. O. 1915, p. 126 [Sepik District], is no doubt synonymous with that species.

"The Brown Honey-eater frequented the lower branches and undergrowth, and did not appear to be so active as *P. n. mimikæ*. I was unable to identify its call."—*C. H. B. G.*

***Ptilotis chrysotis saturation*.**

Ptilotis chrysotis saturation Roths. & Hartert, N. Z. x. p. 445 (1903), xx. p. 516 (1913).

Ptilotis chrysotis filigera van Oort (nec Gould), p. 97 (1909).

a. ♂. Mouth of the Mimika River, 20th March, 1911. [No. 1210, *C. H. B. G.*]

b. ♂. Wakatimi, Mimika River, 4th March, 1911. [No. 1084, *C. H. B. G.*]

c-i. ♂ ♀ et ♂ imm. Upper Mimika River, 27th Jan.-Aug. 1910. [*W. G.*, & Nos. 1013, 1026, 1056, 1121, 1136, *G. C. S.*]

k-a'. ♂ ♀ et ♂ imm. Parimau, Mimika River, 31st Aug.-28th Dec. 1910. [Nos. 66, 216, 222, 244, 253, 254, 260, 265, 292, 487, 504, 572, 606, 671, 721, 855, *C. H. B. G.*; & 1472, *G. C. S.*]

b'-l'. ♂ ♀. White Water Camp, Kaparé River, 17th Oct.-8th Nov. 1910. [Nos. 318, 335, 342, 390, 403, 404, 427, 430, 459, 460, *C. H. B. G.*]

m'. ♂. Kamura River, 15th Sept. 1910. [No. 1170, *G. C. S.*]

n'-p'. ♂ ♀. Wataikwa River, 22nd Sept.-1st Oct. 1910. [Nos. 1225, 1257, 1292, *G. C. S.*]

q^1 . ♀ imm. Iwaka River, 28th Jan. 1911. [No. 951, *C. H. B. G.*]

r^1-d^2 . ♂ ♀ et ♂ imm. Launch Camp, Setakwa River, 5th Oct.-5th Nov. 1912. [*C. B. K.*]

e^2-g^2 . ♂ et imm. Canoe Camp, Setakwa River, 17th-28th Nov. 1912. [*C. B. K.*]

h^2, i^2 . ♂ ♀. Camp 3, Utakwa River, 2500 ft., 26th Nov. & 22nd Dec. 1912. [*C. B. K.*]

k^2 . ♂. Camp 6A, Utakwa River, 2900 ft., 12th Jan. 1913. [*C. B. K.*]

Iris dark brown; bill black; feet bluish-slate-colour.

The very large series of this Honey-eater before me shows clearly that it is separable from *P. c. filigera* from Australia, with which it has been united by Dr. van Oort. The upperparts are much darker brown, and the underparts darker and more rufous; moreover, the pale grey spotting on the occiput and nape, which is always present and conspicuous in *P. c. filigera*, is seldom present in birds from New Guinea, though usually indicated in those from the Aru Islands. Quite young birds resemble the adult, but on the underparts the grey bases of the feathers show to a greater or less extent among the rufous, and the rust-red margins of the wing-coverts are very strongly marked.

The British Museum has recently received two specimens of *P. c. meyeri* from Humboldt Bay, collected by Mr. W. Goodfellow, but does not possess examples of *P. c. madaraszi* Roths. & Hartert, which also inhabits the North coast of New Guinea about Huon Gulf.

"The Rufous-breasted Honey-eater was an extremely plentiful bird everywhere, except on the coast. It was usually observed singly in the lower branches of the large trees. Though similar in its actions to the other species of Honey-eaters it was not quite so quick or active. It has rather a loud call-note."—*C. H. B. G.*

***Ptilotis marmorata*.**

Ptilotis marmorata Sharpe; id. in Gould's Birds N. Guinea, iii. pl. 48 (1883); Gadow, Cat. ix. p. 247, pl. iv. (1884).

Ptilotis cinerea Roths. & Hartert (*nec* Selater), N. Z. x. p. 444 (1903).

Ptilotis cinerea marmorata Roths. & Hartert, N. Z. xx. p. 516 (1913).

a, b. ♀. White Water Camp, Kaparé River, 1500 ft., 31st Oct. & 8th Nov. 1910. [Nos. 395, 458, *C. H. B. G.*]

c-h. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 17th & 18th Jan. 1913. [*C. B. K.*]

i-m. ♂. Camp 6 c, Utakwa River, 5500 ft., 20th Jan. & 19th-25th Feb. 1913. [*C. B. K.*]

Iris violet-grey ; bill sooty-black ; feet bluish-slate-colour. The males are usually somewhat larger than the females.

8 males : wing 102-115 ; 4 females : wing 94-104 mm.

Since writing their "Notes on Papuan Birds," in vol. x. of the 'Novitates Zoologicae,' 1913, Messrs. Rothschild and Hartert have modified a good many of their views on a number of important points. For instance, in vol. x. p. 444, it was definitely stated that *P. marmorata* Sharpe was synonymous with *P. cinerea* Selater, from Arfak, while in vol. xx. p. 516, *P. marmorata* is again resuscitated, but as a subspecies of *P. cinerea*. Apparently the authors are still under the impression that *P. cinerea* is based on an immature specimen with a uniform grey breast, and that the latter becomes spotted with white when the bird is adult. This is certainly a mistake as regards *P. cinerea*, for the British Museum possesses two fully adult examples (specimens *c* and *d* of Salvadori, O. P. ii. p. 339) collected by Bruijn in Arfak, and in both these birds the breast is uniform grey. It is possible that young examples of *P. marmorata* have the breast uniform, but none of our specimens, twenty-six in number, supports this theory, though one at least, from the Aroa River, appears to be immature. The fact is that *P. marmorata* is not nearly related to *P. cinerea*, and cannot be regarded as a subspecies of it, the latter, with its brown back and uniform grey underparts, belonging to a different section of the genus.

Another question which arises is—Should the specimens from Dutch New Guinea listed above be separated from



MENPES PRESS, WATFORD.

- 1. PTILOTTIS ERYTHROPLEURA. ♂
- 2. PTILOTTIS PRECIPUA LORENTZI. ♂

typical *P. marmorata* from British New Guinea? The former, when arranged in series, are distinctly, if slightly, darker grey below, but the difference is so slight that I have not thought it desirable to separate them, especially as this character is not supported by any difference in size. Messrs. Rothschild and Hartert have also identified a pair of birds collected by A. S. Meek on the Utakwa River as *P. marmorata*. The type of this species from the Astrolabe Mountains (*A. Goldie*) is in the British Museum.

***Ptilotis plumbea*.**

Ptilotis plumbea Salvad. Ann. Mus. Civ. Genov. xxxiv. p. 151 (1894) [Moroka]; Roths. & Hartert, N. Z. x. p. 444 (1903), xiv. p. 483 (1907).

a-d. ♂ ♀. Camp 6 B, Utakwa River, 4200 ft., 24th Jan.-8th Feb. 1913. [C. B. K.]

e. ♂. Camp 6 C, Utakwa River, 5500 ft., 20th Feb. 1913. [C. B. K.]

These specimens are perfectly similar to one of the typical examples (specimen *b*), a female, from Moroka, collected by Doria; they also agree with three males from the Owen Stanley Range, 5000-8000 ft., collected by Mr. W. Goodfellow.

In two males from the Utakwa the wing measures 83 and 86 mm. respectively; in two females, 74 and 75 mm.; while in specimens from the Owen Stanley Range three males measure respectively 75, 76, and 78 mm., and one female (the typical bird from Moroka) 69 mm.

It will thus be seen that the Utakwa birds appear to be slightly larger.

***Ptilotis erythropleura*. (Pl. III. fig. 1.)**

Ptilotis erythropleura Salvad.; id. O. P. ii. p. 337 (1881) [Arfak]; Roths. & Hartert, N. Z. xx. p. 516 (1913).

a, b. ♂ ♀. Camp 6 B, Utakwa River, 4200 ft., 25th Jan. & 1st Feb. 1913. [C. B. K.]

c-e. ♂ ♀. Camp 6 C, Utakwa River, 5500 ft., 19th-23rd Feb. 1913. [C. B. K.]

This species is new to the British Museum. I have not been able to compare the Utakwa specimens with typical birds from Arfak ; but they seem to agree exactly with the original description given by Count Salvadori.

In their latest work Messrs. Rothschild and Hartert (*op. cit.*) consider *P. præcipua* Hartert, and *P. p. lorentzi* van Oort, as subspecies of *P. erythropleura*, to which they are evidently not very nearly related. This is now proved, since *P. erythropleura* and *P. p. lorentzi* have been obtained together on the same ground.

The specimen figured is a male, "a" of the above list.

Ptilotis præcipua lorentzi. (Pl. III. fig. 2.)

Ptilotis erythropleura lorentzi van Oort, p. 95 (1909) [Hellwig Mts.] ; Roths. & Hartert, N. Z. xx. p. 515 (1913).

Ptilotis præcipua nigritergum Roths. & Hartert, Bull. B. O. C. xxix. p. 35 (1911).

a. ♀. Camp 6 B, Utakwa River, 4200 ft., 4th Feb. 1913. [C. B. K.]

b. ♀. Camp 6 c, Utakwa River, 5500 ft., 20th Feb. 1913. [C. B. K.]

c. ♂. Camp 9, Utakwa River, 5500 ft., 31st Jan. 1913. [C. B. K.]

This Honey-eater is another interesting addition to the National Collection, and is easily distinguished from the allied form *P. præcipua* Hartert, from the mountains of British New Guinea. *P. p. lorentzi* was first described from the Hellwig Mountains above the Upper Noord River, and was subsequently obtained by A. S. Meek in the Goliath Mountains. As already stated above, both these very distinct forms have been wrongly placed by Messrs. Rothschild and Hartert as subspecies of *P. erythropleura*.

The specimen figured is a male, "c" of the above list.

Ptilotis polygramma.

Ptilotis polygramma Gray ; Gadow, Cat. ix. p. 233, pl. vi. (1884) ; Roths. & Hartert, N. Z. x. p. 447. (1903).

a. ♂. Iwaka River, 8th Feb. 1911. [No. 229, *C. H. B. G.*]

b. ♀. Camp 6 A, Utakwa River, 2900 ft., 14th Jan. 1913.
[*C. B. K.*]

Iris yellow; orbits yellow; bill black; feet bluish-ash-colour.

These specimens agree with the type-specimen procured in Misol by Wallace. The female (*b*), in bright freshly moulted plumage, has the yellow ear-patch much brighter than in any specimen in the British Museum, but this is not the case with the male (*a*), from the Iwaka, which is in moult.

****Ptilotis versicolor*.**

Ptilotis versicolor Gould; van Oort, p. 97 (1909).

A female was recorded from Merauke.

****Entomiza cyanotis griseigularis*.**

Entomiza cyanotis griseigularis van Oort, p. 97 (1909).

The type-specimens, a male and female, of this apparently new subspecies were procured at Merauke.

***Philemon novæguineæ*.**

Tropidorhynchus novæguineæ Müller; Salvad. O. P. ii. p. 357 (1881).

Philemon novæguineæ Gadow, Cat. ix. p. 274 (1884); van Oort, p. 98 (1909).

Philemon n. brevipennis, p. 513 & *P. n. aruensis*, p. 514, Roths. & Hartert, N. Z. xx. (1913).

a-d. ♂. Upper Mimika River, Feb.-2nd May, 1910.
[*W. G.*; & Nos. 1093, 1129, 1148, *G. C. S.*]

e-i. ♂ ♀. Parimau, Mimika River, 30th Aug.-13th Dec. 1910. [Nos. 50, 116, 165, 546, 719, *C. H. B. G.*]

k-q. ♂ ♀. Wataikwa River, 17th Sept.-6th Oct. 1910.
[Nos. 1174, 1254-6, 1282, 1312, 1313, *G. C. S.*]

r-v. ♂ ♀ et ♂ imm. Launch Camp, Setakwa River, 10th-28th Oct. 1912. [*C. B. K.*]

w-z. ♂ et ♂ imm. Canoe Camp, Setakwa River, 26th Oct.-26th Dec. 1912. [*C. B. K.*]

In their latest review of this species Messrs. Rothschild and Hartert (*op. cit.*) recognise no fewer than five subspecies, the specimens from the Utakwa and Setakwa Rivers being described as new under the name *P. n. brevipennis*. Our large series from the Setakwa River and other localities to the west, when compared with typical specimens of *P. novæguineæ* and a series from the Aru Islands, does not seem to support their conclusions, and I am unable to separate the present series or the birds from Aru from the typical form.

The size of the knob at the base of the bill is largely dependent on sex and age, and a male from Dorei has a large knob, scarcely inferior in size to the largest found in any male from Aru. The difference in the colour of the head used as a character is non-existent. The size of the wing, as will be seen by the following measurements, is also of no importance :—

P. novæguineæ, from Arfak, Misol, and Waigiu :

4 males, 145–158 mm. ; 2 females, 140, 150 mm.

P. n. aruensis :

4 males, 144–152 mm. ; 5 females, 138–145 mm.

P. n. brevipennis :

13 males, 139–150 mm. ; 8 females, 130–140 mm.

As regards *P. n. subtuberosus* Hartert, from Fergusson Island, having only one specimen for comparison I cannot express any definite opinion, but I rather doubt if it can be upheld, the knob at the base of the bill being an uncertain character, usually more developed in the male than in the female.

Specimen “v,” a quite young male still partly in down, has no white edges to the feathers of the upperparts, a character found in somewhat older birds, but, as in these, the outer webs of the quills are margined with *olive*, unlike those of the adult.

“This is a common species, keeping usually to the tops of the tallest trees, from whence its loud well-known notes may always be heard. It has a strong flight, and when on the wing I have always observed it in pairs.”—C. H. B. G.

***Timeliopsis flavigula meyeri.**

Timeliopsis flavigula meyeri (Salvad.) ; Roths. & Hartert, N. Z. xx. p. 515 (1913).

Three males were collected by A. S. Meek on Mt. Goliath.

Pycnopygius stictocephalus. (Pl. II. fig. 2.)

Pycnopygius stictocephalus Salvad. ; id. O. P. ii. p. 340 (1881) ; Gadow, Cat. ix. p. 290 (1884) ; Roths. & Hartert, N. Z. x. p. 451 (1903) ; van Oort, p. 98 (1909).

a. ♀. Parimau, Mimika River, 16th Nov. 1910. [No. 496, C. H. B. G.]

Iris hazel ; bill dark purplish-brown ; base of the lower mandible purple ; feet dark slate-colour, darker on the tarsi.

The rare Spangle-crowned Honey-eater is new to the British Museum Collection. Mr. Lorentz procured a pair on the Noord River, and the present specimen, so far as I am aware, is only the seventh example that has been obtained. Its range is known to extend from Salawatti through Southern New Guinea as far east as the Goldie River.

The specimen figured is the female listed above.

***Oreornis chrysogenys.**

Oreornis chrysogenys van Oort, Notes, xxxii. p. 215 (1910) [Snow Mountains, 13,850 ft.].

This new genus and species is based on a single male specimen procured by Mr. H. A. Lorentz on the Snow Mountains at about 13,850 ft.

Family NECTARINIIDÆ.

Cinnyris aspasia.

Hermotimia aspasia Lesson ; Salvad. O. P. ii. p. 247 (1881).

Cinnyris aspasia Gadow, Cat. ix. p. 68 (1884) [part.] ; van Oort, p. 94 (1909) ; Roths. & Hartert, N. Z. x. p. 211 (1903), xiv. p. 475 (1907), xx. p. 512 (1913).

a-f. ♂ ♀ et ♂ imm. Mouth of the Mimika River, 8th Dec. 1910–23rd March, 1911. [Nos. 74, 142, 1164, 1167, 1186, 1256, *C. H. B. G.*]

g, h. ♀. Wakatimi, Mimika River, 28th Dec. 1910 & 10th March, 1911. [Nos. 187, 1143, *C. H. B. G.*]

i-q. ♂ ♀ et ♂ ♀ imm. Parimau, Mimika River, 31st Aug.–26th Dec. 1910. [Nos. 73, 74, 83, 97, 295, 550, 702, 838, *C. H. B. G.*]

r-u. ♂ et ♂ imm. White Water Camp, Kaparé River, 1st–10th Nov. 1910. [Nos. 413, 416, 450, 473, *C. H. B. G.*]

v-d. ♂ ♀ et ♂ ♀ imm. Wataikwa River, 22nd Sept.–11th Oct. 1910. [Nos. 1219, 1220, 1227, 1228, 1245, 1272, 1275, 1349, *G. C. S.*]

d', e'. ♂ et ♂ imm. Launch Camp, Setakwa River, 4th & 11th Oct. 1912. [*C. B. K.*]

Iris hazel ; bill and feet black.

The above series represent examples of typical *C. aspasia*, the type of which came from Dorei, Geelvink Bay.

“The Black-breasted Sun-bird was a common species everywhere, and was to be met with, singly or in pairs, frequenting the same flowering-trees and bushes as the other species.”—*C. H. B. G.*

Cinnyris frenata.

Cyrtostomus frenatus Müller ; Salvad. O. P. ii. p. 265 (1881).

Cinnyris jugularis Linn. ; Gadow, Cat. ix. p. 84 (1884) [part.].

Cinnyris frenata Roths. & Hartert, N. Z. x. p. 213 (1903), xiv. p. 475 (1907).

a-x. ♂ ♀ et ♀ imm. Mouth of the Mimika River, 28th Nov. 1910–23rd March, 1911. [Nos. 2, 47, 62, 64, 68, 72, 75, 78, 86, 97, 103, 106, 115, 148, 1165, 1166, 1175, 1177, 1199, 1200, 1249, 1251, 1253, *C. H. B. G.*]

y. ♂. Launch Camp, Setakwa River, 9th Nov. 1912. [*C. B. K.*]

z-b'. ♂ ♀. Canoe Camp, Setakwa River, 13th Nov. & 5th Dec. 1912. [*C. B. K.*]

Iris hazel ; bill and feet sooty-black.

The type of this Sun-bird was procured by Müller at Lobo, Triton Bay.

In the present series all the birds obtained in December are in moult, many having the plumage much worn ; those killed in March are mostly in new plumage, but one or two have not quite completed their moult.

Only one immature bird, a female, No. 115, was procured.

Nos. 1251 and 1253 are a pair obtained with their nest containing one egg, on the 23rd of March, 1911.

The egg is of a rather long and somewhat pointed oval shape : very slightly glossy. The ground is dull white clouded and marked, especially towards the larger end where the ground is entirely obscured, with several shades of brown and purplish-brown and with a few small darker brown spots. It measures 17.5×11.5 mm.

"The Yellow-breasted Sun-bird was only seen in the mangrove-swamps along the coast, where it was quite common. Both its habits and its call resemble those of its congeners.

"A nest, taken on the 23rd of March, 1911, was fastened to a creeper some 5 feet from the ground, the material being interwoven with the support for a length of nearly 17 inches. The actual nest, which was somewhat globular and deeply cup-shaped, was composed of various kinds of dead vegetation, including leaves and rootlets, and warmly lined with 'thistle down.'

"One egg only was obtained, and the clutch was evidently not complete, as on dissection the hen was found to be still laying."—C. H. B. G.

Family DICÆIDÆ.

Dicæum diversum.

Dicæum geelvinkianum diversum Roths. & Hartert, N. Z. x. p. 215 (1903) ; van Oort, p. 98 (1909) ; Roths. & Hartert, N. Z. xx. p. 511 (1913).

a, b. ♂ ♀. Wakatimi, Mimika River, 25th Nov. 1910, 8th March, 1911. [Nos. 1549, G. C. S. ; 1121, C. H. B. G.]

c-s. ♂ ♀ et ♂ ♀ imm. Parimàu, Mimika River, 30th Aug.-10th Dec. 1910. [Nos. 39, 110, 132, 220, 257, 556, 557, 600, 601, 613, 640, 654, 655, 701, *C. H. B. G.*; 1477, 1520, *G. C. S.*]

t. ♂. Kamura River, 16th Sept. 1910. [No. 1172, *G. C. S.*]

u. ♀ imm. White Water Camp, Kaparé River, 8th Nov. 1910. [*C. H. B. G.*]

v-z. ♂ ♀. Wataikwa River, 22nd Sept.-28th Oct. 1910 & 10th Feb. 1911. [Nos. 1221, 1369, 1370, 1448, *G. C. S.*]

a'. ♂. Launch Camp, Setakwa River, 4th Nov. 1912. [*C. B. K.*]

b'-e'. ♂. Canoe Camp, Setakwa River, 28th Oct.-12th Dec. 1912. [*C. B. K.*]

f'. ♂. Camp 3, Utakwa River, 18th Dec. 1912. [*C. B. K.*]

Adult. Iris brown; bill black; feet purple-brown or black.

In describing *D. geelvinkianum*, Meyer stated that this species was found on the islands of Jobi, Misore, and Mafoor in Geelvink Bay [*cf.* Sitz. Ak. Wien, lxx. Heft i. p. 120 (1874)]; but, as a matter of fact, his type-specimens ♂ and ♀ came from the Island of Jobi. These were lent to Gould and figured by him in the 'Birds of New Guinea,' iv. pl. 6 (1879). In 1875 Count Salvadori pointed out that the birds from Misore and Mafoor differed, not only *inter se*, but also from that found on Jobi, and named all three. It is obvious, however, that *D. geelvinkianum* Meyer must be retained for the Jobi bird, *D. jobiense* Salvad. becoming a synonym.

There is no example of the Jobi bird in the British Museum, but *D. mysoriense* Salvad. and *D. maforense* Salvad. are both represented.

D. diversum, first described from the Ambernoh River, has also been recorded from Humboldt Bay on the north coast of Dutch New Guinea, and in the south from the Setakwa and Noord Rivers. Some of the males in our large series have a good deal of bluish metallic colour on the back and wings,

and it would be interesting to compare these with typical *D. geelvinkianum*, which must be very closely allied, the scarlet on the head, rump, and breast being equally bright red in both.

Young. Iris brown ; bill tomato-red, tip dusky ; feet dark ash-colour.

"This little Flower-pecker was very common everywhere, especially around Parimau, where it frequented the large more or less cleared space around the camp. It has a sharp little call-note, and is rather active in its habits. It is very tame and easily procured. It was often seen in pairs, but single birds were frequent."—*C. H. B. G.*

Pristorhamphus versteri meeki.

Pristorhamphus versteri meeki Roths. & Hartert, Bull. B. O. C. xxix. p. 36 (1911) ; iid. N. Z. xx. p. 511 (1913).

a. ♀ imm.? Camp 6 A, Utakwa River, 2900 ft., 20th. Jan. 1913. [*C. B. K.*]

b, c. ♂ et ♀ [marked ♂]. Camp 6 B, Utakwa River, 4200 ft., 26th Jan. & 4th Feb. 1913. [*C. B. K.*]

d. ♀. Camp 11, Utakwa River, 8000 ft., 7th Feb. 1913. [*C. B. K.*]

Messrs. Rothschild and Hartert have described this dark-breasted form from a series of specimens obtained by A. S. Meek on Mt. Goliath. It is new to the British Museum.

In this genus the females seem to be considerably larger than the males. In *P. versteri* two males from Arfak have wing-measurements of 58 and 59 mm. respectively, while an almost certain female [marked ♂ by Bruijn] measures 69 mm.

In the present form the wing in the male (*b*) measures 61 mm. and in the females (*c* and *d*) 66 and 68 mm. respectively.

A female (*a*), apparently the immature of this species, has no white spots on the tail, and the feathers of the breast are brownish with pale yellowish-white edges, giving these parts a streaked appearance.

Melanocharis chloroptera.

Melanocharis chloroptera Salvad.; id. O. P. ii. p. 284 (1881); Sharpe, Cat. x. p. 80 (1885).

Melanocharis nigra chloroptera Roths. & Hartert, N. Z. x. p. 216 (1903), xiv. p. 477 (1907), xx. p. 511 (1913).

a. ♂ imm. Wakatimi, Mimika River, 28th Dec. 1910. [No. 190, *C. H. B. G.*]

b-c'. ♂ ♀ et ♂ imm. Parimàu, Mimika River, 31st Aug.-25th Dec. 1910. [Nos. 72, 84, 120, 246, 482-4, 513, 535-7, 558-60, 567, 577, 580, 595, 597, 625, 662, 670, 723, 737, 798, 799, 827, *C. H. B. G.*]

d'. ♀ juv. White Water Camp, Kaparé River, 500 ft., 15th Oct. 1910. [No. 312, *C. H. B. G.*]

e'. ♂. Wataikwa River, 22nd Oct. 1910. [No. 1420, *G. C. S.*]

f'-k'. ♂ ♀. Launch Camp, Setakwa River, 4th Oct.-5th Nov. 1912. [*A. F. R. W.*; *C. B. K.*]

l'-r'. ♂ ♀. Canoe Camp, Setakwa River, 14th Nov. 1912-3rd Jan. 1913. [*C. B. K.*]

Adult. Iris dark brown; bill black; base of the lower mandible slaty; feet dark slate-colour.

Juv. Similar, but gape yellow.

The type of *M. chloroptera* Salvad., which came from the Aru Islands, differs in no way from those in the large series from Southern Dutch New Guinea.

The only examples of *M. nigra* (Lesson) in the British Museum are from Waigiu and Misol; the type-locality is Dorei.

The young female is more olive on the upperparts than the adult.

"The Green-winged Black Flower-pecker was common everywhere and inhabited the lower trees and the undergrowth, except on the coast. It had a sharp call-note and was very active in its movements. It was observed both singly and in pairs. Numbers used to frequent the trees and bushes in the large clearing around the camp at Parimàu."—*C. H. B. G.*

****Melanocharis striativentris*.**

Melanocharis striativentris Salvad.; Roths. & Hartert, N. Z. xx. p. 511 (1913).

A female was procured by A. S. Meek on the Utakwa River, 2500 ft.

****Rhamphocharis crassirostris*.**

Rhamphocharis crassirostris Salvad.; Roths. & Hartert, N. Z. xx. p. 511 (1913).

Recorded from Mt. Goliath.

Family ZOSTEROPIDÆ.

***Zosterops chrysolæma*.**

Zosterops chrysolæma Salvad.; id. O. P. ii. p. 368 (1881); Sharpe, Cat. ix. p. 177 (1884); Roths. & Hartert, N. Z. x. p. 452 (1903).

a. ♂. Iwaka River, 11th Feb. 1911. [No. 1029, C. H. B. G.]

Iris light hazel; bill black; feet bluish-ash-colour.

This specimen seems to agree exactly with the description of the type from Arfak, but appears to be somewhat smaller: wing 53 mm. It is new to the British Museum.

The Tring Museum possesses two males from Kapaur.

"On the only occasion a White-eye was seen, a pair passed along the stunted trees on the peak where my camp was situated. Both were shot, but one fell down the steep mountain-side and was lost in the dense undergrowth."--
C. H. B. G.

***Zosterops fuscicapilla*.**

Zosterops fuscicapilla Salvad.; id. Orn. Pap. ii. p. 372 (1881); Sharpe, Cat. ix. p. 178 (1884); Finsch, Tierreich, Zosteropidæ, p. 35 (1901); Roths. & Hartert, N. Z. x. p. 453 (1903).

a. ♂. Camp 9, Utakwa River, 5500 ft., 4th Feb., 1913.
[C. B. K.]

This appears to be a typical example of *Z. fuscicapilla*: the wing measures 60 mm.

Family SITTIDÆ.

***Neositta albifrons*.**

Neositta albifrons (Ramsay) ; Hellmayr, Tierreich, Sittidæ, p. 230 (1903) ; Roths. & Hartert, N. Z. xiv. p. 474 (1907).

a. ♂. Camp 9, Utakwa River, 5500 ft., 27th Jan. 1912. [C. B. K.]

This specimen is in full moult as regards the wings and tail, but it appears to agree closely with Ramsay's description.

It was described from the Astrolabe Mts., and has been recorded from the Angabunga River by Messrs. Rothschild and Hartert (*op. cit.*).

The species is new to the British Museum, and appears to be a very rare bird.

****Daphænositta miranda frontalis*.**

Daphænositta miranda frontalis van Oort, Notes, xxxii. p. 214 (1910) [Hellwig Mts., 8700 ft.].

Three males of this remarkable Nuthatch were procured in the Hellwig Mountains at about 8700 ft., two being adult and one a young bird. Dr. van Oort does not consider that these birds are likely to be the males of *D. miranda* De Vis, which was described from a single female example procured on Mt. Scratchley, 12,000 ft. (*cf.* Salvadori, Ibis, 1898, p. 208, pl. iv.). The present form differs chiefly in having a broad band on the forehead and the sides of the face crimson, while the feathers of the throat are crimson with white bases.

Family PARIDÆ.

***Oreocharis arfaki*.**

Oreocharis arfaki (Meyer) ; Sharpe, Cat. x. p. 53 (1885) ; Roths. & Hartert, N. Z. x. p. 479 (1903), xx. p. 512 (1913).

a, b. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 30th Jan. & 2nd Feb. 1913. [C. B. K.]

c. ♂. Camp 11, Utakwa River, 8000 ft., 6th Feb. 1913. [C. B. K.]

This beautiful species, originally described by Meyer as

Parus (?) *arfaki*, has been placed among the Dicæidæ by Salvadori, Sharpe, and others. The plumage of the male is strongly reminiscent of that of the Titmice, and though it does not possess a small first primary as in *Parus*, I am inclined to associate it with that group rather than with the Flower-peckers. In the Dicæidæ a parallel case is to be found; for the genus *Dicæum* has no first primary as in *Oreocharis*, while *Prionochilus* has a distinct bastard-primary as in *Parus*.

Family LANIIDÆ.

***Pachycare flavogrisea subaurantia*.**

Pachychare flavogrisea van Oort (nec Meyer), p. 92 (1909).

Pachychare flavogrisea subaurantia Roths. & Hartert, N. Z. xx. p. 510 (1913) [Utakwa River, 3000 ft.].

a. ♂. White Water Camp, Kaparé River, 700 ft., 28th Oct. 1910. [No. 385, *C. H. B. G.*]

b-g. ♂ ♀. Iwaka River, 6th-11th Feb. 1911. [Nos. 226, 997, 1008, 1009, 1013, 1023, *C. H. B. G.*]

h-v. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 26th Nov.-27th Dec. 1912. [*C. B. K.*]

w-y. ♀ et ♂ ♀ imm. Camp 6 A, Utakwa River, 2900 ft., 6th-13th Jan. 1913. [*C. B. K.*]

The orange-yellow colour in freshly moulted specimens gradually fades, but even in worn specimens from Southern Dutch New Guinea the orange-wash on the head and underparts renders them separable from typical specimens of *P. flavogrisea* from Arfak. The latter species probably ranges eastwards along Northern New Guinea to South-east New Guinea, as specimens from British New Guinea are apparently perfectly similar to those from Arfak, the general colour of the head and underparts being bright canary-yellow without a trace of the orange which is characteristic of freshly moulted specimens of *P. f. subaurantia*.

Six examples marked "♀," which appear to be fully adult birds, have a dark olive-coloured patch on the ear-coverts and hinder part of the cheek. Two birds, also marked "♀," are

brilliantly coloured and resemble the adult male : in these the sex has almost certainly been wrongly determined by the Dyak collector.

Young males resemble the female.

The male is rather larger than the female : wing 64–67 mm. as compared with 63 mm.

“The Yellow and Grey Thick-head was only observed in the mountains, where it was tolerably common around my highest camp on the Iwaka River. One pair were seen at White Water Camp, near the pygmy village ; but though both birds were secured, one skin seems to have been subsequently lost.

“This bird was always observed in pairs, and frequented the lower branches of the larger trees. If one was shot, the other remained about calling softly for its mate.”—*C. H. B. G.*

****Eulacestoma nigropectus*.**

Eulacestoma nigropectus De Vis ; Sclater, *Ibis*, 1904, p. 373, pl. ix. ; Roths. & Hartert, *N. Z.* xx. p. 510 (1913).

Recorded from Mt. Goliath, where several specimens were collected by A. S. Meek.

***Pachycephala soror klossi*, subsp. n.**

There seem to be three well-marked races of this species:—

1. Typical form from Arfak. (*Pachycephala soror* Sclater.)

Pachycephala soror Sclater ; Gadow, *Cat.* viii. p. 196 (1883) ; Roths. & Hartert, *N. Z.* x. p. 103 (1903) [part. Arfak].

Male. Tail with the terminal third and the basal two-thirds along the shaft black, margined with olive-green.

Female. Back olive-brown inclining to reddish-olive.

2. Form from the Utakwa Valley. (*P. soror klossi*, subsp. n.)

Pachycephala soror Roths. & Hartert (nec Sclater), *N. Z.* xx. p. 508 (1913).

Male. Tail quite black, with sometimes a trace of olive-green edges at the extreme base of the feathers.

Female. Back dark olive-green.

3. Form from British New Guinea. (*P. soror bartoni*, subsp. n.)

Pachycephala soror Roths. & Hartert (nec Sclater), N. Z. x. p. 103 (1903) [part.], xiv. p. 470 (1907).

Male. Tail green, the black along the shaft widening out near the extremity.

Female. Like the female of No. 2 from the Utakwa Valley.

Though these races are closely allied they cannot be united, and I have therefore named them as above.

Messrs. Rothschild and Hartert [N. Z. xiv. p. 471 (1907)] noticed the brownish-olive colour of the back in the female of typical *P. soror* from Arfak, but did not separate the British New Guinea form owing to lack of material.

a-c. ♂ et ♀ imm. Iwaka River, 5th-13th Feb. 1911. [Nos. 222, 1033, 1042, *C. H. B. G.*]

d-g. ♂ et ♀ imm. Camp 3, Setakwa River, 2500 ft., 27th Nov.-26th Dec. 1912. [*C. B. K.*]

h-k. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 7th-19th Jan. 1913. [*C. B. K.*] (*Including the types of the sub-species.*)

l-r. ♂ ♀ et ♂ imm. Camp 6 B, Utakwa River, 4200 ft., 25th Jan.-6th Feb. 1913. [*C. B. K.*]

s-x. ♂ ♀. Camp 6 C, Utakwa River, 5500 ft., 17th-24th Feb. 1913. [*C. B. K.*]

Adult. Iris brown; bill black; feet dark ash-colour.

Two specimens collected by the Dyaks at Camp 6 C, which are marked "♂," are doubtless adult females.

An immature female (No. 1042) still retains one or two rufous-edged secondary quills of the first plumage.

***Pachycephala aurea*.**

Pachycephala aurea Reichenow, Orn. Monatsb. vii. p. 131 (1899) [Ramu R., North-east New Guinea]; van Oort, p. 92 (1909); Roths. & Hartert, N. Z. x. p. 102 (1903), xx. p. 508 (1913).

a, b. ♂ ♀. Kamura River, 18th May, 1910. [Nos. 1156, 1158, *G. C. S.*]

c-n. ♂ ♀ et ♂ ♀ imm. Wataikwa River, Aug.-28th Oct. 1910. [W. G.; & Nos. 1186, 1187, 1210, 1305, 1322, 1331, 1377, 1421, 1446, 1447, G. C. S.]

o. ♂ imm. Canoe Camp, 21st Dec. 1912. [C. B. K.]

Iris brown; bill black; legs slate-colour.

Total length in the flesh about 170 mm. (= 6 $\frac{3}{4}$ ins.).

In the adult males the patch of white on the throat varies greatly in individuals; in one example (No. 1421) it is represented by a few partially white feathers, and in another specimen, also procured by Mr. Goodfellow on the Wataikwa River, the white is reduced to a small spot.

Messrs. Rothschild and Hartert (*op. cit.* p. 508) have described a bird from the Upper Setakwa River which they believe to be the unknown female of this species, but it does not agree with the adult females in the series listed above. These resemble the male, but are not of quite so brilliant a yellow on the back and underparts. Mr. Rothschild's specimen may be a quite young example, for in a young male (No. 1377) some of the feathers of the crown are slightly edged with pale olive.

In younger males and females the back is washed with olive, and the black wing-coverts and upper tail-coverts are more or less fringed with the same colour.

This fine species is new to the British Museum.

"Chunggat, one of the Dyaks who was at Wataikwa, told me this Golden-yellow Thick-head usually frequented the banks of reeds and rough stuff growing in the wide stony bed of that river."—C. H. B. G.

Pachycephala schlegeli obscurior.

? *Pachycephala schlegeli* Schleg.; Gadow, Cat. viii. p. 195 (1883); Roths. & Hartert, N. Z. x. p. 103 (1903), xx. p. 508 (1913) [Mt. Goliath].

Pachycephala schlegeli obscurior Hartert, N. Z. iii. p. 15 (1896); Roths. & Hartert, *t. c.* x. p. 103 (1903), xiv. p. 471 (1907).

Pæcilodryas caniceps De Vis, Ibis, 1897, p. 377 [between Mambare and Vanapa Rivers, Owen Stanley Range].

Pachycephala sororcula De Vis, Ibis, 1897, p. 380 [same locality as above].

Pæcilodryas caniceps pectoralis van Oort, Notes, xxxii. p. 213 (1910) [Hellwig Mts., 8700 ft.].

a. ♂. Camp 6 B, Utakwa River, 4200 ft., 2nd Feb. 1913. [C. B. K.]

b-h. ♂ ♀. Camp 6 c, Utakwa River, 5500 ft., 17th-23rd Feb. 1913. [C. B. K.]

i-m. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 26th-29th Jan. 1913. [C. B. K.]

n, o. ♂. Camps 10-11, Utakwa River, 7000 ft., 3rd & 4th Feb. 1913. [C. B. K.]

p-s. ♂ ♀ et ♂ imm. Camp 11, Utakwa River, 8000 ft., 6th-9th Feb. 1913. [C. B. K.]

Most of the specimens listed above are indistinguishable from typical examples of *P. s. obscurior* Hartert, from Eafa District, Owen Stanley Range, and differ slightly from the two examples of typical *P. schlegeli* from Arfak in the British Museum, as pointed out by Dr. Hartert. He has identified three females from Mt. Goliath as typical *P. schlegeli*; but this is no doubt an error, as they have the crown, sides of the head, and ear-coverts dark grey instead of greyish-brown as in the females from the Arfak Mts. In this respect the Goliath birds resemble females of *P. s. obscurior*, but the latter differ slightly in having the upper breast olive-green below the grey of the chest, whereas in the birds from Mt. Goliath and in a female specimen "s," from the Utakwa River, 8000 ft., which are quite similar to one another, the yellow of the breast joins the grey of the throat and is not separated by an olive-green zone. As adult males from Utakwa River, 8000 ft., do not differ in any way from specimens taken at lower elevations and listed above, I have not attempted to separate them, but it is quite possible that with a larger series of female specimens it may be found advisable to do so.

The female of *P. s. obscurior* has been described by De Vis as *Pæcilodryas caniceps* (*vide supra*); also Messrs. Rothschild and Hartert are no doubt right in regarding *Pachycephala*

sororcula of the same author as the young male of this subspecies. The young male has also been described by Dr. van Oort (*vide supra*) as a new subspecies, *Pæcilodryas caniceps pectoralis*.

Among the fine series procured by Mr. Walter Goodfellow in the Owen Stanley Range there is a young male still partially in first plumage. It resembles the female in general appearance, but some of the feathers on the crown and most of those on the occipital and superciliary regions are chestnut.

A still younger bird (sex not indicated) from South-east New Guinea resembles the above, but the throat and fore-neck are also mixed with chestnut; likewise the wing-coverts and secondaries.

The youngest stages, with the plumage chestnut, have been described by Messrs. Rothschild and Hartert (N. Z. x. p. 104).

***Pachycephala griseiceps*.**

Pachycephala griseiceps Gray; Gadow, Cat. viii. p. 215 (1883); Roths. & Hartert, N. Z. x. p. 105 (1903), xx. p. 509 (1913).

a-f. ♂ ♀ et ♂ imm. Wakatimi, Mimika River, 1st Jan.—10th March, 1911. [Nos. 214, 1104, 1106, 1112, 1113, 1139, *C. H. B. G.*]

g, h. ♂ ♀. White Water Camp, Kaparé River, 4th Nov. 1910. [Nos. 437, 438, *C. H. B. G.*]

i. ♂. Launch Camp, Setakwa River, 8th Nov. 1912. [*C. B. K.*]

k. ♂. Camp 3, Utakwa River, 2500 ft., 16th Dec. 1912. [*C. B. K.*]

Adult. Iris reddish-brown; bill black; feet ash-colour tinged with lilac.

Immature. Iris brown; bill sooty-brown; feet dusky ash-colour.

March specimens are in freshly moulted plumage.

A young male (No. 1112) differs from the adult in having some of the greater wing-coverts and most of the secondaries rufous-chestnut on the outer web.

"This Thick-head was by no means common. It had much the same habits and appearance as the Spotted Flycatcher."
—C. H. B. G.

***Pachycephala hattamensis*.**

Pachycephala hattamensis Meyer; Gadow, Cat. viii. p. 225 (1883); Roths. & Hartert, N. Z. x. p. 107 (1903).

a. ♂. Camp 6 A, Utakwa River, 2900 ft., 6th Jan. 1913. [C. B. K.]

b. ♀. Camp 6 B, Utakwa River, 4200 ft., 30th Jan. 1913. [C. B. K.]

c, d. ♀. Camp 6 C, Utakwa River, 5500 ft., 18th & 25th Feb. 1913. [C. B. K.]

Specimens from the Utakwa Valley seem to be rather smaller and rather brighter yellow on the belly than typical *P. hattamensis* from Arfak. The wing-measurements are as follows:—

Arfak.	Utakwa River.
♂ 102 mm.	♂ 91 mm.
♂ 102 "	♀ 92 "
♀ 94 "	♀ 88 "
	♀ 84 "

***Pachycephala gamblei*.**

Pachycephala gamblei Roths. Bull. B. O. C. vii. p. xxii (1897).

Pachycephala rufinucha gamblei Roths. & Hartert, N. Z. x. p. 104 (1903), xiv. p. 471 (1907), xx. p. 508 (1913).

a, b. ♀. Camp 9, Utakwa River, 5500 ft., 29th & 30th Jan. 1913. [C. B. K.]

A quite young example of this species was procured by Mr. W. Goodfellow at Bagutana Camp, Owen Stanley Range, 8000 ft. It is in nestling-plumage and has the crown brown, the back inclining to deep chestnut, all the feathers being tipped with that colour; the chin, throat, and underparts chestnut; the quills brownish-black edged with olive-green; the wing-coverts edged with chestnut. This remarkable chestnut plumage in the young bird is also found in *P. s. obscurior*, and is perhaps a characteristic of the genus.

This is an aberrant species with short soft wings and tail,

and I feel doubtful whether it should be retained in the genus *Pachycephala*.

***Pachycephala poliosoma approximans*.**

Pachycephala poliosoma approximans Ogilvie-Grant, Bull. B. O. C. xxix. p. 26 (1911).

Pachycephala poliosoma Roths. & Hartert (nec Sharpe), N. Z. xx. p. 509 (1913).

a-g. ♂ ♀. Itakwa River, 23rd Jan.—6th Feb. 1911. [Nos. 902, 913, 914, 915, 922*, 957*, 1001, *C. H. B. G.*] (* *Types of the subspecies.*)

h-o. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 20th Nov. 1912—8th Jan. 1913. [*C. B. K.*]

This subspecies is most nearly allied to *P. poliosoma* Sharpe, from British New Guinea; but the top of the head and ear-coverts are very dark slate-grey like the rest of the underparts, while in *P. poliosoma* the crown and ear-coverts are washed with brown: also the fore-neck and chest are uniform dark grey like the rest of the underparts, while in *P. poliosoma* they are washed with earthy-brown immediately below the white throat.

Iris yellowish-white; bill black; feet ash-colour.

Wing 105–106 mm., tail 61–67 mm.

For some unknown reason Dr. Hartert has refused to recognise this perfectly distinct form, of which our expeditions procured fourteen examples, all precisely similar. Of typical *P. poliosoma* Sharpe, from South-east New Guinea, we have a series of nineteen examples, all of which differ in the manner described, possessing a brownish-grey crown and brown upper chest. When laid out in two series the two forms are strikingly different and should clearly be kept separate.

“This Grey Thick-head was tolerably common in the mountains. It frequented the ground and was usually met with singly. It might easily be mistaken for a grey species of *Pitta*.”—*C. H. B. G.*

***Pachycephala dorsalis*.**

Pachycephala dorsalis Ogilvie-Grant, Bull. B. O. C. xxix. p. 26 (1911).



MENPES PRESS, WATFORD.

PACHYCEPHALA LEUCOSTIGMA.

1. ♂ ADULT. 2. ♂ IMMATURE.

a. ♂. Mouth of the Mimika River, 21st March, 1911.
[No. 1220, *C. H. B. G.*] (*Type of the species.*)

This species is most nearly allied to *P. monacha* G. R. Gray, but the upperparts are uniform deep black instead of dull brownish-black. Iris brown; bill black; feet dark ash-colour. Total length ca. 160 mm.; wing 92; tail 65.

Count Salvadori, has examined the type of *P. lugubris* Müller, from the Utanata River, and considers it synonymous with *P. monacha* [*cf.* O. P. ii. p. 233 (1881)].

Pachycephala tenebrosa.

Pachycephala tenebrosa Roths. Bull. B. O. C. xxix. p. 20 (1911); Roths. & Hartert, N. Z. xx. p. 508 (1913).

a, b. ♂ ♀. Camp 6 c, Utakwa River, 5500 ft., 20th Feb. 1913. [*C. B. K.*]

This dark brown species, described from specimens procured by A. S. Meek on Mt. Goliath, is new to the British Museum.

Like *P. gamblei*, this is a somewhat aberrant species of the genus *Pachycephala*, the wings and tail being rather soft and rounded.

***Pachycephala leucostigma.* (Pl. IV.)**

Pachycephala leucostigma Salvad. O. P. ii. p. 234 (1881); Roths. & Hartert, N. Z. x. p. 107 (1903), xiv. p. 473 (1907), xx. p. 509 (1913).

a. ♂ imm. Camp 6 b, Utakwa River, 4200 ft., 22nd Feb. 1913. [*C. B. K.*]

This male agrees with the description of the adult male given by Messrs. Rothschild and Hartert, but most of the greater and median wing-coverts are edged with rufous, as well as the feathers on the cheeks and throat. A young male specimen in the British Museum from the Arfak Mountains agrees with Count Salvadori's description of that stage of plumage.

This is a very curious and aberrant species; even the most adult males, such as that obtained by Mr. W. Goodfellow in the Owen Stanley Range and the one procured on Mt. Goliath by A. S. Meek, appear to represent some

younger stage of plumage. The nestling plumage of the young is much like that of the adult, and not chestnut as in the typical species of *Pachycephala* such as *P. schlegeli*. I have had the advantage of examining a fine series of this species, kindly lent me by the Tring Museum.

The specimens figured on Pl. IV. are the adult male procured by Mr. W. Goodfellow and the immature male from the Utakwa River.

***Cracticus quoyi*.**

Cracticus quoyi Lesson ; Gadow, Cat. viii. p. 94 (1883) ; van Oort, p. 93 (1909) ; Roths. & Hartert, N. Z. x. p. 93 (1903), xx. p. 507 (1913).

a, b. ♂. Mouth of the Mimika River, 10th Dec. 1910 & 14th March, 1911. [Nos. 107, 1148, *C. H. B. G.*]

c, d. ♂. Upper Mimika River, 27th Feb. & 8th May, 1910. [Nos. 1088, 1151, *G. C. S.*]

e-i. ♂ ♀ et ♀ juv. Parimau, Mimika River, 1st Sept.-28th Dec. 1910. [Nos. 86, 816, 861, *C. H. B. G.* ; 1468, 1478, *G. C. S.*]

k. ♂. Iwaka River, 23rd Jan. 1911. [No. 929, *C. H. B. G.*]

l, m. ♀. Canoe Camp, Setakwa River, 29th Oct. & 23rd Nov. 1912. [*C. B. K.*]

Adult. Iris dark brown ; bill pale bluish-slate, darker at the tip ; feet black or dark slate-colour.

Young female. Iris raw sienna ; bill ash ; gape lemon ; feet dark ash-colour.

“Quoy’s Piping-Crow was not nearly so common as the pied species, *C. cassicus*, and was not seen to consort with it. A young female (No. 86), taken on the 1st of September, has the upperparts black and glossy as in the adult, the underparts smoky-black. It had left the nest, but was not yet able to fly.”—*C. H. B. G.*

***Cracticus cassicus*.**

Cracticus cassicus (Bodd.) ; Gadow, Cat. viii. p. 97 (1883) ; van Oort, p. 92 (1909) ; Roths. & Hartert, N. Z. x. p. 92 (1903), xx. p. 507 (1913).

a. ♀. Mimika River, 13th April, 1910. [No. 1130, *G. C. S.*]

b-g. ♂ ♀ et ♂ imm. Parimàu, Mimika River, 31st Aug.-30th Dec. 1910. [Nos. 64, 87, 213, 214, 865, 874, *C. H. B. G.*]

h-p. ♂ ♀ et ♂ imm. Wataikwa River, Aug. 1910-7th Feb. 1911. [*W. G.*; & Nos. 1189, 1343, 1406, 1445, *G. C. S.*; 3 unnumbered, *C. H. B. G.*]

q, r. ♀. Launch Camp, Setakwa River, 8th Oct. 1912 & 10th March, 1913. [*C. B. K.*]

s-a'. ♂ ♀ et ♂ imm. Canoe Camp, Setakwa River, 20th Nov.-24th Dec. 1912. [*C. B. K.*]

I agree with Meyer [*Sitzungsb. Ak. Wien*, lxix. Abt. i. p. 507 (1874)], that in fully adult birds the upper back is white with an irregular black patch confined to the middle of the mantle. There seems to be no difference in plumage between the male and female, but in the former the bill is rather longer, measuring about 53-55 mm., as compared with 45-49 mm. in the female.

Immature birds of both sexes have the black mottling of the back extending to and joining the black of the neck and head, which are duller in colour than in the adult.

A quite young male, specimen *p*, killed on the 6th February, is attaining its first plumage; the blackish feathers of the head and throat, as well as the wing-coverts, are edged with sandy-brown.

Another immature male (No. 214) has attained the first plumage, but still retains some of the smoky-black, sandy-edged feathers on the crown, throat, and wing-coverts.

The fully adult plumage appears to be assumed at the second moult.

"The Pied Piping-Crow is by far the commoner of the two species of *Cracticus* in the Mimika district. It was generally observed in small parties in the tops of tall trees, and was apparently feeding on berries, etc. It has a loud call and is very crow-like in many of its actions."—*C. H. B. G.*

Family PRIONOPIDÆ.

***Pinarolestes megarhynchus*.**

Pinarolestes megarhynchus (Quoy & Gaim.); Sharpe, Cat. iii. p. 295 (1877); van Oort, p. 94 (1909); Roths. & Hartert, N. Z. x. p. 99 (1903), xx. p. 507 (1913).

a. ♂ imm. Wakatimi, Mimika River, 26th Aug. 1910. [No. 22, *C. H. B. G.*]

b. ♂ imm. Upper Mimika River, 21st Feb. 1910. [No. 1082, *G. C. S.*]

c-h. ♂ et ♀ imm. Parimau, Mimika River, 1st Sept.–21st Dec. 1910. [Nos. 75, 137, 296, 534, 543, 783, *C. H. B. G.*]

i-o. ♂ ♀ et ♂ imm. White Water Camp, Kaparé River, 15th Oct.–30th Nov. 1910. [Nos. 309, 310, 337, 370, 425, 428, *C. H. B. G.*]

p-w. ♂ ♀ et ♀ imm. Wataikwa River, 18th Sept.–9th Oct. 1910. [Nos. 1178, 1212, 1253, 1281, 1283, 1294, 1311, & 1336, *G. C. S.*]

x-z. ♂ ♀. Iwaka River, 23rd Jan.–4th Feb. 1911. [Nos. 907, 907 A, 987, *C. H. B. G.*]

a'. ♀. Launch Camp, Setakwa River, 18th Oct. 1912. [*C. B. K.*]

b'-g'. ♂ ♀ et ♂ imm. Canoe Camp, Setakwa River, 23rd Oct.–2nd Dec. 1912. [*C. B. K.*]

h'-l'. ♂ ♀ et ♂ ♀ imm. Camp 3, Utakwa River, 2500 ft., 10th Dec. 1912–11th Jan. 1913. [*C. B. K.*]

m'. ♀. Camp 6 A, Utakwa River, 2900 ft., 11th Jan. 1913. [*C. B. K.*]

Adult. Iris brown; bill brown or sooty-brown; lower mandible paler; feet light slate-colour or bluish-ash.

The sexes are quite similar in plumage.

Younger birds have the feathers surrounding the eyes and the sides of the occiput dark chestnut; the wing-coverts and secondary quills fringed and washed on the outer web with the same colour.

In both adult and young the colour of the upperparts varies somewhat in different individuals, some inclining to

olive-brown, others inclining to greenish and approaching *P. aruensis* Gray and *P. despectus* Roths. & Hartert, from South-east New Guinea.

Two nests, each containing two eggs, were taken in October at White Water Camp, Kaparé River. These are cup-shaped, and composed of leaves and rootlets. Both were situated in saplings about three feet from the ground. In each case the parent birds were secured.

Two eggs taken on the 25th Oct. 1910 are of a very broad oval form, rather smaller towards one end. They are smooth and glossy: the ground-colour is yellowish-white, rather thickly mottled and spotted with yellowish umber-brown and lilac-grey distributed over the whole surface, but rather more dense round the larger end. They measure respectively 23×19 and 22×18 mm.

Two eggs taken on the 15th Oct. 1910 have a very different appearance to the above. One is of a rather long, pointed, oval form; the other less elongate. They are smooth and somewhat glossy; the ground-colour is pale yellowish-white or creamy-white, with rather distinct small blotches and spots of umber-brown and lilac-grey distributed over the shell, more particularly round the larger end, and in one egg forming a rather distinct zone. They measure respectively 27×19.5 and 26×20 mm.

Eggs of this species are new to the British Museum Collection.

"The Small Rufous Wood-Shrike is a common species everywhere, and was usually observed in the lower branches of the trees and among the undergrowth. It is by no means wild, except whilst nesting, when much patience is required to wait for the return of the sitting female after she has been disturbed."—*C. H. B. G.*

Pitohui dichrous.

Rectes dichrous Bonap. Compt. Rendus, xxxi. p. 563 (1850)
[Lobo, ex Müll.].

Rhectes dichrous Salvad. O. P. ii. p. 195 (1881).

Pitohui dichrous monticola Roths. Bull. B. O. C. xiv. p. 79 (1904) [Aroa River].

a-c. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 9th & 12th Jan. 1913. [C. B. K.]

These birds must be typical examples of *P. dichrous* (Bonap.), the type of which was procured by S. Müller at Lobo, Triton Bay. They do not differ in any way from examples met with in South-east New Guinea, including the Aroa River, and the name *P. d. monticola* Roths. must therefore be added to the synonymy.

Sharpe [Cat. iii. p. 284 (1877)] made the mistake of uniting *P. dichrous* (Bonap.) with *P. cirrhocephalus* (Lesson); the latter, the type of which came from Dorei, Geelvink Bay, is a distinct and much larger species. In *P. dichrous* the plumage of the sexes is alike, both having the head and fore-neck black, while in the much larger and stronger-billed *P. cirrhocephalus* both sexes have the head and fore-neck of a soiled grey colour.

P. dohertyi Roths. & Hartert [N. Z. x. p. 95 (1903)], described from Ron I., Geelvink Bay, is close to *P. dichrous*, but larger: wing 127–130 mm. as compared with 105 mm. The British Museum possesses one male specimen from Inviorage, procured by A. B. Meyer, which agrees exactly with the description of *P. dohertyi* and has the head, throat, and fore-neck quite black. According to Salvadori [O. P. ii. p. 197 (1881)], the species found at Inviorage is his *P. decipiens*, which has the head dark grey or almost black. It seems probable that these two forms may be phases of the same species.

Among the birds collected by Mr. Goodfellow at Sekar, North-west New Guinea, there is an immature male example probably referable to *P. decipiens*, but with the head, throat, and fore-neck dark grey, instead of brownish-grey, the tail black, and the wings slightly washed with olive on the outer webs of the secondaries.

These three species are distinguished from the allied forms of the group, by having the rump and upper tail-coverts chestnut like the back.

A male bird procured at Humboldt Bay by Mr. W. Goodfellow differs slightly from typical *P. dichrous* in having the

back darker chestnut and the underparts rufous-chestnut instead of cinnamon-rufous. There are, however, in the British Museum three examples from Collingwood Bay, two of which closely resemble the specimen from Humboldt Bay, while the third is paler, like the birds from the Aroa River ; even among birds from the Aroa District and Astrolabe Mountains there is one individual which is of a much darker chestnut than the remaining nine.

Pitohui aruensis nigripectus.

Pitohui aruensis nigripectus van Oort, p. 93 (1909) ; Roths. & Hartert, N. Z. xx. p. 506 (1913).

a-e. ♂ et ♂ ♀ imm. Wakatimi, Mimika River, 23rd Aug. 1910-4th March, 1911. [Nos. 15, 191, 192, 197, 1091, *C. H. B. G.*]

f-i. ♂ ♀. Upper Mimika River, 2nd-19th Feb. 1910. [Nos. 1016, 1020, 1070, 1074, *G. C. S.*]

k-t. ♂ ♀ et ♂ imm. Parimau, Mimika River, 28th Aug.-30th Dec. 1910. [Nos. 30, 149, 509, 629, 632, 779, 837, 844, 845, 873, *C. H. B. G.*]

u, v. ♂ et ♂ imm. White Water Camp, Kaparé River, 16th & 21st Oct. 1900. [Nos. 315, 357, *C. H. B. G.*]

w-y. ♂. Wataikwa River, 16th-31st Oct. 1910. [Nos. 1383, 1428, 1463, *G. C. S.*]

z, a'. ♂ et ♂ imm. Launch Camp, Setakwa River, 16th & 17th Oct. 1912. [*C. B. K.*]

b'. ♂. Canoe Camp, Setakwa River, 28th Dec. 1912. [*C. B. K.*]

c'-e'. ♂ imm. Camp 3, Utakwa River, 2500 ft., 8th Dec. 1912. [*C. B. K.*]

f'. ♂ vix ad. Camp 6 A, Utakwa River, 2900 ft., 19th Jan. 1913. [*C. B. K.*]

Adult male and female. Iris deep crimson or claret-red ; bill black ; feet dark slate or sooty-black.

Of this recently described form we have received a fine series.

This subspecies is new to the British Museum.

The *males* differ only in size from those of *P. aruensis*

(Sharpe), the wing averaging about 125 mm. as compared with 115 mm. in the Aru bird.

The *females* are, however, quite distinct, the head, throat, and fore-neck of the present subspecies being dull orange-rufous tinged with brownish instead of sooty-black, and the rest of the underparts bright cinnamon-rufous.

Our series of younger males confirms the differences in plumage already pointed out by Dr. van Oort, but there has evidently been some confusion over the marked difference between the plumage of the adult male and female. Birds marked as "♀" in his list of specimens are referred to lower down in the text as "Younger birds Nos. 286 & 297." These are no doubt fully adult females.

Messrs. Rothschild and Hartert add to the confusion by stating that in the adult female only "the throat and jugulum" are black, whereas in the male the entire breast and part of the abdomen are pure black. The specimens they refer to as females are evidently less mature males in which the sex has been wrongly determined.

This is proved by our series of eight younger males (Nos. 149, 191, 357, 837, 845, 1016, 1020, 1383). It is only in the three most adult male birds, No. 15 from the Mimika River and two examples from the Setakwa River, that the black on the breast extends towards the belly.

The young female has the back reddish-brown instead of chestnut, and the throat and fore-neck cinnamon like the rest of the underparts.

P. meridionalis (Sharpe), from British New Guinea, is a closely allied but still larger form, with the wing in male examples over 130 mm. in length. The female is at present unknown to me, but it seems possible that the bird described as *Rhectes phaeocephalus* Reichenow [*cf.* Orn. Monatsb. viii. p. 187 (1900)], from the Bailalla River, South-east New Guinea, may represent the female of *P. meridionalis*, or it may be referable to *P. brunneiceps* (D'Alb. & Salvad.). The type-specimen of *R. phaeocephalus* from the Bailalla River, procured by E. Weiske, is in the British Museum,

“This Wood-Shrike was observed throughout the country traversed, and is a bold, fearless, and inquisitive bird, often approaching within a few feet of one. Its call is a loud clear whistle and a series of melodious whistling notes; the alarm-note is harsh.”—*C. H. B. G.*

****Pitohui cirrhocephalus decipiens.***

Rhectes decipiens Salvad. O. P. ii. p. 197 (1881).

Pitohui kirrhocephalus decipiens (Salvad.); van Oort, p. 93 (1909).

A male is recorded from Etna Bay. The species is not represented in the British Museum. (*Cf.* remarks on p. 100.)

Pitohui cristatus.

Rectes cristatus Salvad.; Sharpe, Cat. iii. p. 286 (1877).

Rhectes cristatus Salvad. O. P. ii. p. 202 (1881).

Pitohui cristatus Roths. & Hartert, N. Z. x. p. 98 (1903), xx. p. 507 (1913).

a-c. ♀ et ♂ imm. Iwaka River, 31st Jan.—2nd Feb. 1911. [Nos. 867, 964, 970, *C. H. B. G.*]

d. ♀. Canoe Camp, Setakwa River, 31st Dec. 1912. [*C. B. K.*]

Adult. Iris brown; bill black; feet pale bluish-ash-colour.

Immature. Iris brown; bill purplish-horn; gape lemon-yellow; feet livid flesh.

The type of this species was described from Mt. Morait, North-west New Guinea, and it appears to be very generally distributed from west to east, ranging from the Arfak Mountains to the Owen Stanley Range and Astrolabe Mountains.

“The Crested Wood-Shrike was only observed in the mountains, where it was found frequenting the ground on the steeper slopes, but was either scarce or very wary. Its call was not heard.”—*C. H. B. G.*

Pitohui ferrugineus.

Pseudorectes ferrugineus Bonap.; Sharpe, Cat. iii. p. 287 (1877).

Pitohui ferrugineus van Oort, p. 94 (1909); Roths. & Hartert, N. Z. x. p. 97 (1903), xx. p. 506 (1913).

a, b. ♂ et ♀ imm. Mouth of the Mimika River, 2nd & 12th Dec. 1910. [Nos. 31, 123, *C. H. B. G.*]

c-g. ♂ ♀ et ♂ imm. Upper Mimika River, 27th Jan.-19th Feb. 1910. [Nos. 1011, 1014, 1027, 1057, 1076, *G. C. S.*]

h-g. ♂ ♀. Parimau, Mimika River, 28th Aug.-22nd Dec. 1910. [Nos. 31, 36, 136, 162, 604, 605, 682, 710, 797, *C. H. B. G.*]

r, s. ♂ ♀. White Water Camp, Kaparé River, 12th & 17th Oct. 1910. [Nos. 301, 321, *C. H. B. G.*]

t-v. ♀. Wataikwa River, 23rd Sept.-4th Oct. 1910. [Nos. 1232, 1268, 1295, *G. C. S.*]

w. ♀. Iwaka River, 27th Jan. 1911. [No. 925, *C. H. B. G.*]

x. ♂. Launch Camp, Setakwa River, 7th Oct. 1912. [*C. B. K.*]

y-a'. ♂ ♀. Canoe Camp, Setakwa River, 15th Nov.-4th Dec. 1912. [*C. B. K.*]

b'. ♀. Camp 3, Utakwa River, 2500 ft., 9th Dec. 1912. [*C. B. K.*]

Iris pale Naples-yellow or white; bill black; feet slate-colour or bluish-ash.

Total length in the flesh 279-305 mm. (=11-12 ins.).

Almost all the birds in the above series are in moult.

A quite young female (No. 31) hardly differs from the adult in colour, but the texture of the plumage is much softer. The bill in this specimen is brownish in the dried skin, but the soft-parts are not recorded; in a young male (No. 1011) the iris is dull white, the bill dark brown, and the feet slate-blue.

The females are somewhat smaller than the males, as will be seen by the following measurements:—

Males: wing 136-146 mm. Females: wing 129-141 mm.

"The Ferruginous Wood-Shrike was common throughout all the country traversed. It was generally met with in pairs and had much the same habits as *P. a. nigripectus*."—*C. H. B. G.*

****Pitohui incertus*.**

Pitohui incertus van Oort, p. 94 (1909).

This new species, said to be allied to *P. ferrugineus*, but much smaller, was procured on the Noord River by Mr. H. A. Lorentz.

***Pitohui meeki*.**

Pitohui meeki Roths. & Hartert, N. Z. xx. p. 507 (1913).

a. ♂. Camp 6 A, Utakwa River, 2900 ft., 10th Jan. 1913. [*C. B. K.*]

b-d. ♂ ♀ et ♂ imm. Camp 6 B, Utakwa River, 4200 ft., 1st Feb. 1913. [*C. B. K.*] (♂ *Type of the species.*)

This species was described from a single female example procured by A. S. Meek on Mt. Goliath. The female specimen *c* of the pair collected by the Wollaston Expedition agrees well with the original description. The male, hitherto unknown, appears to differ from the male of *P. nigrescens* (Schleg.) in the following points, but, unfortunately, the Museum does not possess examples of the latter species from Arfak.

The crown is slaty-black like the back, not jet-black; the underparts are also slaty-black, but rather paler than the back and not black, inclining to slaty-black on the flanks and under tail-coverts. Wing 126 mm.

From the male type of *P. schistaceus* (Reichenow) from the Aroa River, which is in the British Museum, the male of *P. meeki* differs in being more slate-coloured, especially on the underparts.

A quite young male, specimen *d*, is blackish above, most of the feathers being widely fringed with chestnut: the underparts are a mixture of grey and chestnut, with some rusty-buff feathers on the middle of the abdomen.

This species is new to the British Museum.

***Grallina bruijni*.**

Grallina bruijni Salvad.; id. O. P. ii. p. 191 (1881).

Pomareopsis bruijni Roths. & Hartert, N. Z. x. p. 93 (1903).

a, b. ♂ ♀. Camp 11, Utakwa Valley, 8000 ft., 8th Feb. 1913. [*C. B. K.*]

Bill plumbeous; feet black.

♂ wing 105 mm.; ♀ wing 101 mm.

The type of Bruijn's *Grallina* came from Arfak, whence the species ranges to Eastern New Guinea.

Family ARTAMIDÆ.

***Artamus leucorhynchus leucopygialis*.**

Artamus leucogaster Valenc.; Sharpe, Cat. xiii. p. 3 (1890).

Artamus leucorhynchus leucopygialis Gould; van Oort, p. 91 (1909); Roths. & Hartert, N. Z. x. p. 112 (1903), xx. p. 506 (1913).

a-j. ♂ ♀ et ♂ imm. Mouth of the Mimika River, 28th Nov. 1910 & 14th–22nd March, 1911. [Nos. 5, 6, 49, 158, 159, 160, 1158, 1160, 1192, 1235, *C. H. B. G.*]

k. ♀. Wataikwa River, 27th Sept. 1910. [No. 1263, *G. C. S.*]

Iris dark brown; bill pale blue, becoming indigo or blackish towards the tip; feet dusky black (September) or bluish-slate-colour (March).

Total length in the flesh about 185 mm. (=7.25 ins.).

Birds killed in September, November, and December are in worn plumage, inclining to brownish on the back; those killed in March are in fresh plumage, but the primary-quills and tail-feathers are not quite complete.

A young bird (No. 159) has the feathers of the back and wing-coverts tipped with rufous, and some of the white feathers of the rump and underparts, especially the chest, similarly tipped with rufous. All the wing-quills are margined at the extremity with pale whitish-buff, and the tail-feathers tipped with similar colour. In the dried skin the bill is brown, paler towards the gape.

"The White-rumped Wood-Swallow was seen commonly along the coast, either perched on the top of some dead tree or skimming swiftly over the sands, seldom far above the surface of the ground. It has a pretty chattering note, and on occasions three or four were seen together."—*C. H. B. G.*

Artamus maximus.

Artamus maximus Meyer ; Sharpe, Cat. xiii. p. 8 (1890) ; Roths. & Hartert, N. Z. x. p. 112 (1903), xx. p. 506 (1913).

a-c. ♂ et ♂ imm. Camp 6 c, Utakwa River, 5500 ft., 15th & 18th Feb. 1913. [*C. B. K.*]

The young male has some of the feathers of the throat and wing-coverts mottled with whitish at the extremity ; the greater wing-coverts, quills, and tail-feathers edged at the tip with pure white. The wings in two adult males measure 164, 165 mm.

Family SYLVIIDÆ.

Malurus alboscapulatus.

Malurus alboscapulatus Meyer ; Sharpe, Cat. iv. p. 297 (1879) ; Salvad. O. P. ii. p. 119 (1881) ; van Oort, p. 91 (1909) ; Roths. & Hartert, N. Z. x. p. 478 (1903), xx. p. 502 (1913).

Malurus lorentzi van Oort, p. 91 (1909) ; Roths. & Hartert, N. Z. xx. p. 502 (1913).

a-h. ♂ ♀ et ♂ ♀ imm. Mouth of the Mimika, 28th Nov. 1910–24th March, 1911. [Nos. 3, 24, 36, 45, 1265, 1267, 1271, 1275, *C. H. B. G.*]

i. ♂. Mimika River, 23rd May, 1910. [No. 1163, *G. C. S.*]

k. ♂. Kamura River, 18th May, 1910. [No. 1155, *G. C. S.*]

l-b'. ♂ ♀ et ♀ imm. Wataikwa River, 20th Sept.–21st Nov. 1910 & 10th Feb. 1911. [Nos. 1196–8, 1207–9, 1216–8, 1371, 1372, 1385, 1386, 1401, 1536, *G. C. S.* ; 1275 A, 1275 B, *C. H. B. G.*]

c', d'. ♂, ♀ imm. Canoe Camp, Setakwa River, 15th Nov. & 31st Dec. 1912. [*C. B. K.*]

Adult male. Iris dark brown ; bill black ; feet dark ash-colour or black.

Adult female. Like the male, but the feet are pinkish-brown.

Immature. Very similar to the adult, but feet dark or pale brown.

In the above series there are eighteen males and eleven females ; fourteen of the former being in the adult black and white dress ; the remaining four, together with the females, being smoky-brown above and whitish below. Males in full breeding-plumage were obtained in the months of September, October, November, December, February, March, and May ; the only long interval in our dates between the months of June and August being bridged over by three males in full dress from the Utakwa River, obtained by A. S. Meek in July, and by examples from Arfak killed in June, and from Simbang procured in August and September.

Speaking of the males of the Australian *Malurus* Gould [Handb. B. Austr. i. p. 317 (1865)] says :—" Their gay attire, however, is only assumed during the pairing-season, and is retained for a very short period, after which the sexes are alike in colouring." Referring to this statement, Mr. A. J. Campbell remarks : " Gould's statement needs modification, for while the male Wrens do change their dress, they do not ' retain it for a short period ' but for eight or nine months of the year, or excepting the moulting season" [Nests & Eggs Austr. Birds, i. p. 165 (1901)]. This statement is fully confirmed by observations made by Mr. D. Seth-Smith on certain species of *Malurus* living in the Zoological Gardens at Regent's Park. The eclipse-plumage is very irregularly assumed and only retained for a short period.

On the other hand, Mr. A. J. North maintains that males of the various species of *Malurus* may be seen in full dress throughout the year, and that the individual having once attained its full adult livery always retains it. This is certainly a mistake as regards Australian species, probably caused by individual irregularity of the dates at which the eclipse-plumage is assumed.

From the series of *M. alboscapulatus* before me it would at first sight seem that the black and white livery is perennial, but two male specimens (Nos. 1275 and 1386) are almost certainly adults in eclipse-plumage. It must, however, be remembered that there is in the Tring Museum a full-plumaged specimen killed in June, when, according to Mr. Campbell's statement (*t. c.* p. 167), *M. cyaneus* is in eclipse-plumage. Further remarks on this subject by Mr. Hall will be found in the Proceedings of the Royal Society of Victoria, xii. pp. 59-73 (1899).

It has been stated that the males of *Malurus* take three years to assume full-plumage, but in the present species I can see no reason for believing that this is really the case.

A female in nestling-plumage (No. 45) has the whole of the upperparts, including the wings, dark greyish-brown, without the conspicuous whitish-buff edges to the greater wing-coverts, scapulars, and secondaries, and without the white tips to the tail-feathers which characterise the adult female. This latter also possesses white shoulder-tufts, but less developed than in the male.

A quite young male (No. 24) resembles No. 45 described above, but has a few pale-margined wing-coverts making their appearance. More mature birds in their second plumage resemble the adult female. In this stage of plumage, or in the eclipse, the species has been described as *M. lorentzi* by Dr. van Oort. Birds from South-east New Guinea have been separated as *M. a. naimii* Salvad. & d'Alb., on account of their smaller size.

M. alboscapulatus.
South-west New Guinea.
13 males: wing 49-53 mm.
7 females: wing 47-50 mm.

M. a. naimii.
South-east New Guinea.
7 males: wing 45-47 mm.

There are several very puzzling points about this species which require clearing up. Dr. van Oort has recorded the male and female as black and quite similar to one another in plumage; but the sex of the female had no doubt been wrongly determined. Males in eclipse-plumage and females

with brown backs and white underparts he regarded as representing a distinct species, *M. lorentzi*.

In the Tring Museum there are eight adult specimens collected at Takar in North New Guinea by W. Doherty, three marked ♂ and five ♀: all are black, but those marked ♀ are duller and less glossy. There is also a nestling in first plumage which is sooty-black.

In the whole of our large series the black birds, fourteen in number, are without exception males, while of those with brown upperparts and white underparts, fifteen in number, eleven are females and four are males, three being in eclipse-plumage and one (No. 24) in first plumage. In at least four instances black males were shot in company with one or two brown and white females, and there can be no doubt that they are males and females of the same species.

Again, in the smaller race, *M. a. naimii*, there is an adult male from the Aroa River moulting from a white breast into a black one, that is, from the eclipse-plumage to the breeding-plumage.

It would therefore seem that the birds collected by Doherty at Takar in North New Guinea represent a distinct form in which the female is black like the male, but is duller and less glossy; and the nestling is sooty-black. Whether this bird with the black female is the typical *M. alboscapulatus* or not, I am unable to say, not having been able to examine or find a description of a female from Arfak. If the female of the Arfak bird is black, then our series from Southern New Guinea is not *M. alboscapulatus* and must stand as *M. lorentzi* van Oort, which was based on males in eclipse-plumage and females.

"The Pied Wren-Warbler was a fairly common bird, especially near Wakatimi, frequenting the long grass and reeds, along the stony river-beds or the more or less open banks of the rivers. It was usually observed in small parties, and in its habits and actions is very similar to the species of *Cisticola* and *Prinia*. It was a delightful little bird, very tame, and might constantly be seen crossing the open spaces with an undulating flight. Its note is short and rather sharp."—C. H. B. G.

Sericornis olivacea.

Sericornis olivacea Salvad. Ann. Mus. Civ. Genov. xxxvi. p. 100 (1896) [Moroka]; Roths. & Hartert, N. Z. xiv. p. 466 (1907), xx. p. 502 (1913).

Sericornis pusilla Roths. & Hartert, N. Z. x. p. 228 (1903) [Mt. Gayata, Richardson Range].

a-c. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 21st & 23rd Nov. 1912 & 12th Jan. 1913. [C. B. K.]

d. ♀. Camp 6 A, Utakwa River, 2900 ft., 12th Jan. 1913. [C. B. K.]

e. ♂. Camp 6 B, Utakwa River, 4200 ft., 28th Jan. 1913. [C. B. K.]

The British Museum possesses a typical example of this species from Moroka: specimen *c* (No. 303) of Salvadori's list, op. cit.

Our specimens from the Utakwa River, though very similar to typical examples from British New Guinea, seem to differ constantly in having the throat and the middle of the belly distinctly whiter. Dr. Hartert, however, assures me that a specimen in the Tring Museum, from the Utakwa River, 30th Oct. 1910, procured by A. S. Meek, differs in no way from typical *S. olivacea*. I have therefore refrained from separating the present specimens, as the difference may be due to season.

Sericornis perspicillata.

Sericornis perspicillata Salvad. Ann. Mus. Civ. Genov. xxxvi. p. 99 (1896) [Moroka]; Roths. & Hartert, N. Z. x. p. 228 (1903), xx. p. 502 (1913).

a, b. ♂ ♀. Camp 6 B, Utakwa River, 4200 ft., 29th Jan. & 1st Feb. 1913. [C. B. K.]

c-e. ♂. Camp 6 c, Utakwa River, 5500 ft., 19th-22nd Feb. 1913. [C. B. K.]

Thanks to the efforts of Mr. W. Goodfellow the British Museum now possesses a series of typical examples of *S. perspicillata* from the type-locality Moroka and from the Owen Stanley Range. The Museum also possesses a specimen from Aroa River (*E. Weiske*) which has been compared

with the type-specimen by Count Salvadori. All these birds agree with the above series from Dutch New Guinea.

****Sericornis arfakiana nouhuysi*.**

Sericornis arfakiana nouhuysi van Oort, p. 90 (1909); Roths. & Hartert, N. Z. xx. p. 502 (1913).

This large race of *S. arfakiana* was described from the Hellwig Mountains, Noord River, and was subsequently obtained by A. S. Meek on Mt. Goliath.

Messrs. Rothschild & Hartert recognise three forms :—

1. *S. arfakiana*, Arfak, hills near Humboldt Bay, Karon Mts.
2. *S. a. nouhuysi*, Hellwig Mountains and Mt. Goliath.
3. *S. a. oorti*, South-east New Guinea.

****Sericornis meeki*.**

Sericornis meeki Roths. & Hartert, N. Z. xx. p. 503 (1913).

Described from two female examples procured by A. S. Meek on Mt. Goliath.

In the British Museum Collection there are four examples of a species of *Sericornis* said to have been collected near Humboldt Bay, North New Guinea, by J. M. Dumas and very nearly related to *S. beccarii* Salvad., which is believed to be peculiar to the Aru Islands. These four specimens seem to have the ear-coverts of a paler and lighter brown tinged with rufous. The difference is so slight that, pending the arrival of further material, I have identified them with *S. beccarii*.

Family TURDIDÆ.

****Geocichla papuensis*.**

Turdus (Geocichla) papuensis (Seebohm); Roths. & Hartert, N. Z. xx. p. 505 (1913).

An immature female of this Mountain-Thrush was procured on the Utaqua River, 3000 ft.

***Saxicola quadrimaculatus*.**

Pæcilodryas quadrimaculatus van Oort, Notes, xxxii. p. 213 (1910) [Hellwig Mts., 8700 ft.].

α . [♂]. Mt. Carstensz, Camp 13, 10,500 ft., 1st Feb. 1913. [C. B. K.]

Iris dark ; bill and feet black.

This species is a Chat, and not a Flycatcher as originally described. It agrees tolerably closely with the description of the female type of *Pæcilodryas quadrimaculatus* obtained on the Hellwig Mountains at about 8700 ft.

Dr. van Oort describes his type-specimen as "Plumage shining black, with a white spot at both sides of the breast and with the four inner secondaries white, the fourth tipped with black. Iris red-brown ; bill and feet black. Bill 13, wing 95, tail 61, tarso-met. 30 mm."

In the present specimen the inner secondaries are all tipped with black, and the fourth one has the white confined to the basal three-quarters of the inner web, and there is also a streak of white at the base of the inner web of the fifth quill. The wing measures 105 ; tail 75 ; tarsus 29.5 mm.

This greater size may indicate that the present specimen is a male, but the sex has not been ascertained.

The species is new to the British Museum.

Other allied species of Black Chats which have been included among the Flycatchers (*Pæcilodryas*), but should be referred to *Saxicola*, are :—

Pæcilodryas sigillata De Vis, Ann. Rep. Brit. N. Guinea, p. 59 (1890). Mt. Victoria, S.E. New Guinea.

Pæcilodryas æthiops Sclater, P. Z. S. 1880, p. 66, pl. vii. fig. 1. New Britain.

Myiolestes ? bimaculata Salvad. Ann. Mus. Civ. Genov. vi. p. 84 (1874). Arfak Mountains.

Family TIMELIIDÆ.

Crateroscelis murinus.

Crateroscelis murinus (Sclater) ; Sharpe, Cat. vii. p. 59 (1883) ; Roths. & Hartert, N. Z. x. p. 226 (1903), xiv. p. 465 (1907), xx. p. 501 (1913) [Lobo] ; van Oort, p. 90 (1909).

Brachypteryx brunneiventris Meyer, Sitzungs. Ak. Wien, lxi. p. 497 (1874) [Rubi].

Sericornis? fulvipes Ramsay, P. L. S. N. S. W. iv. p. 468 (1880) [Goldie River].

Crateroscelis rufobrunnea Roths. & Hartert, Bull. B. O. C. xi. p. 25 (1900) [Mt. Maori, Humboldt Bay].

a, b. ♂ ♀. Upper Mimika River, 18th Feb. & 31st March, 1910. [Nos. 1073, 1117, *G. C. S.*]

c-g. ♂ ♀. Parimàu, Mimika River, 4th Sept.-19th Dec. 1910. [Nos. 117, 118, 204, 205, 775, *C. H. B. G.*]

h, i. ♂ et ♂ imm. White Water Camp, Kaparé River, 12th & 18th Oct. 1910. [Nos. 306, 307, *C. H. B. G.*]

k-q. ♂ ♀ et ♂ imm. Wataikwa River, 18th Sept.-3rd Oct. 1910. [Nos. 1177, 1194, 1195, 1206, 1235, 1236, 1297, *G. C. S.*]

r. ♂. Iwaka River, 23rd Jan. 1911. [No. 903, *C. H. B. G.*]

s-v. ♂ ♀. Canoe Camp, Setakwa River, 11th Nov.-13th Dec. 1912. [*C. B. K.*]

w, x. ♂. Camp 3, Utakwa River, 2500 ft., 20th Nov. 1912 & 13th Jan. 1913. [*C. B. K.*]

y. ♂. Camp 6 A, Utakwa River, 2900 ft., 9th Jan. 1913. [*C. B. K.*]

Adult. Iris hazel, reddish-brown, or dark brown; upper mandible blackish, lower whitish-horn-colour; feet flesh-colour tinged with blue.

Immature. Iris brown; upper and under mandibles sooty-brown; gape yellow; feet bluish-flesh-colour.

After examining a series of examples of *C. murinus* from all parts of New Guinea I cannot see any reason for distinguishing more than one form. Messrs. Rothschild and Hartert now recognise the fact that their *C. rufobrunnea*, with both mandibles black, is merely a young bird, similar to Nos. 306 & 1206 in the above series.

"This Bush-Babbler was a common bird around Parimàu, and extended upwards into the mountain-range; but it was not observed near the coast. As a rule it haunts the undergrowth and low trees, where it creeps about searching for food, only taking short flights from plant to plant. It was seen both singly and in pairs, and was exceedingly confiding. The call is a rather weak sound."—*C. H. B. G.*

Ifrita coronata.

Ifrita coronata Roths. Bull. B. O. C. vii. p. liv (1898) [Mountains of British New Guinea]; id. N. Z. vi. p. 218, pl. iii. (1899); Roths. & Hartert, N. Z. x. p. 226 (1903), xiv. p. 465 (1907), xx. p. 504 (1913).

a-c. ♂ ♀. Camp 6 c, Utakwa River, 5500 ft., 19th & 24th Feb. 1912. [C. B. K.]

d. [♀]. Camp 10-11, Utakwa River, 7000 ft., 3rd Feb. 1913. [C. B. K.]

Iris reddish or reddish-brown; upper mandible black, lower yellowish flesh-colour; feet olive-green.

Examples of this very handsome species from the steep banks of the Upper Utakwa River do not appear to differ in any way from typical examples from the Owen Stanley Mountains.

Among the recent accessions in the British Museum there are several specimens from Bagutana Camp, Owen Stanley Range, 8000 ft., collected by Mr. W. Goodfellow. Two of these are quite young male birds, and have the blue on the crown much duller than in the adult and confined to the hinder part; the crown dark dull brown instead of jet-black; the greater and median wing-coverts conspicuously tipped with bright rufous-buff; and no white stripe above the buff ear-coverts. The younger of the two males has all the tail-feathers in quill and they measure about 20 mm.

****Androphilus viridis*.**

Androphilus viridis Roths. & Hartert, N. Z. xx. p. 504 (1913).

The male type of this most interesting new species was procured by A. S. Meek on Mt. Goliath.

****Amalocichla brevicauda*.**

Amalocichla brevicauda De Vis; Roths. & Hartert, N. Z. xx. p. 504 (1913).

A. S. Meek procured a single male on Mt. Goliath.

***Pomatorhinus isidori*.**

Pomatorhinus isidori Less.; Sharpe, Cat. vii. p. 432 (1883); van Oort, p. 89 (1909); Roths. & Hartert, N. Z. x. p. 231 (1903), xx. p. 505 (1913).

a, b. ♂ ♀. Upper Mimika River, 9th Feb. & 26th March, 1910. [Nos. 1038, 1106, *G. C. S.*]

c-m. ♂ ♀ et ♀ imm. Parimàu, Mimika River, 26th Sept.-31st Dec. 1910. [Nos. 263, 524, 525, 553, 554, 834, 835, 836, 836 A, 836 B.]

Adult. Iris yellow, dirty yellow or pale hazel; bill yellow, blackish towards the base of the culmen; feet blackish.

Immature. Iris dark brown; bill as in the adult, but lemon-yellow at the gape; feet sooty-grey.

This very distinct species of *Pomatorhinus* was described from Dorei. Though so different in coloration and general appearance from other species of the group, it resembles *P. montanus*, the type of the genus, in general structure.

Young birds resemble the adult in colour, but may be recognised by their shorter bill and by the more downy quality of the feathers of the underparts, especially on the thighs and vent.

"This striking Babbler was only observed on the upper reaches of the rivers, where it was usually seen in small parties in the larger trees. It has a weak flight and a rather loud call-note."—*C. H. B. G.*

Eupetes cærulescens nigricrissus.

Eupetes nigricrissus Salvad.; Sharpe, Cat. vii. p. 339 (1883).

Eupetes cærulescens nigricrissus van Oort, p. 90 (1909); Roths. & Hartert, N. Z. xx. p. 505 (1913).

a, b. ♂ ♀. Wakatimi, Mimika River, 24th Dec. 1910 & 8th March, 1911. [Nos. 177, 1122, *C. H. B. G.*]

c. ♂ imm. Lower Mimika River, Jan. 1910. [*W. G.*]

d-f. ♂ ♀. Upper Mimika River, Feb., 31st March, & 29th April, 1910. [*W. G.* & Nos. 1116, 1137, *G. C. S.*]

g-u. ♂ ♀ et ♂ ♀ imm. Parimàu, Mimika River, 8th Sept.-15th Dec. 1910. [Nos. 108, 109, 123, 143, 144, 230, 262, 282, 512, 518, 528, 529, 738, 739, *C. H. B. G.*]

v-x. White Water Camp, Kaparé River, 400-1000 ft., 12th Oct.-5th Nov. 1910. [Nos. 302, 344, 446, *C. H. B. G.*]

y-d'. ♂ ♀ et ♂ imm. Wataikwa River, Aug. & 17th Sept.-24th Oct. 1910. [*W. G.* & Nos. 1175, 1242, 1356, 1364, 1426, *G. C. S.*]

e'. ♂. Iwaka River, 30th Jan. 1911. [No. 958, *C. H. B. G.*]

f'-*l'*. ♂ ♀. Launch Camp, Setakwa River, 4th-30th Oct. 1912 & 24th March, 1913. [*C. B. K.*]

m'-*r'*. ♂ ♀ et ♂ imm. Canoe Camp, Setakwa River, 1st Nov. 1912-1st Jan. 1913. [*C. B. K.*]

Iris hazel; bill black; feet purplish-brown.

The types of *E. nigricrissus* were procured at Naiabui, Fly River, and all the series listed above are referable to that subspecies. *E. caerulescens* Temm. was first discovered further west by Müller at Lobo, at the head of Triton Bay. It is easily distinguished by having the general colour greyish-blue, while in *E. nigricrissus* it is blue-grey, the former colour predominating. In *E. caerulescens* the sexes are said to be alike in plumage, but in *E. nigricrissus* the female has well-marked white superciliary streaks commencing behind the nostrils and continued along the sides of the occiput.

In younger birds the breast and underparts are more or less blackish, and the white superciliary streak is developed in the male as well as in the female, as, for example, in specimens 108, 302, and 529.

No. 1356, a young male from Wataikwa, is remarkable in having all the under tail-coverts broadly tipped with white; the same peculiarity may be noted in No. 109, an immature female.

"The Black-vented *Eupetes* was a common bird everywhere, though sparingly met with on the coast. It is a ground-bird and was always found in pairs, which usually separated on seeing an intruder and kept calling to one another as they ran. The call is a loud 'kissick,' generally repeated once or twice, and, though the birds were by no means really wild, a sharp look out had to be kept to see them, as they took every advantage of the tree-stems, roots, etc., and were not easy to see."—*C. H. B. G.*

Eupetes castanonotus saturatus.

Eupetes castanonotus saturatus Roths. & Hartert, N. Z. xx. p. 505 (1913).

a-c. ♂ et ♂ imm. Wataikwa River, 7th & 17th Oct. 1910. [Nos. 1317, 1318, 1387, *G. C. S.*]

d, e. ♀. Camp 3, Utakwa River, 19th & 28th Dec. 1912.
[C. B. K.]

Iris dark brown; bill black; legs very dark olive-brown or dusky black. Total length 266–272 mm. ($=10\frac{1}{2}$ – $10\frac{3}{4}$ inches.).

This distinct form resembles *E. castanonotus* in having the eye-brow stripe blue in both sexes; in *E. pulcher* Sharpe, from South-east New Guinea, it is blue in the male and rufous or rufous white in the female. It differs from both in having the back darker chestnut-red, and the underparts purplish-blue.

An immature bird (No. 1318), probably a female, has a short light chestnut band above the black ear-coverts, and the greater part of the breast and underparts dark blackish-grey with a mixture of purplish-blue feathers.

“The Dyak Chunggat told me that he only saw this *Eupetes* near the Wataikwa River camp, where it was apparently scarce. Certainly we never came across it in the other localities visited or passed through.”—C. H. B. G.

****Eupetes leucostictus loriae*.**

Eupetes leucostictus loriae Salvad.; Roths. & Hartert, N. Z. xx. p. 505 (1913).

A female was recorded from Mt. Goliath.

Family CAMPOPHAGIDÆ.

***Lalage kara microrhyncha*, subsp. n.**

a-f. ♂ ♀ et ♀ imm. Mouth of the Mimika River, 3rd–9th Dec. 1910 & 25th March, 1911. [Nos. 38, 48, 53, 70, 81, 1280, C. H. B. G.] (Including the types of the subspecies.)

g, h. ♀. Wakatimi, Mimika River, 7th & 10th March, 1911. [Nos. 1114, 1133, C. H. B. G.]

This subspecies was only met with on the lower Mimika River. Both sexes may be distinguished from *L. karu* (Lesson) by the shorter and much less robust bill, measuring 9·5–10 mm. from the anterior wall of the nasal opening to the tip of the culmen. In *L. karu* the bill measures 10·5–11 mm.

Adult male. The fully adult male (No. 48: type of the subspecies) has the breast-feathers white, with no trace of dark

cross-lines on the underparts, but in a less mature bird (No. 38) the barring is present on the breast, sides, and flanks, but only faintly indicated. Wing 93-94 mm. Iris black; bill black; feet slaty-black.

Adult female. The breast is much greyer than in the females of *L. karu* or of *L. k. polygrammica*, the cinnamon-buff of the underparts being confined to the middle of the belly and hardly extending beyond the basal part of the breast; whereas in *L. karu* the cinnamon wash usually extends to the throat and suffuses the whole under surface. Wing 89-91 mm.: one individual (No. 70) 96 mm. Iris brown; bill black; feet ash-colour.

The immature female is easily distinguished by having the greater primary wing-coverts bordered towards the tip with white, as in No. 81.

"This little Cuckoo-Shrike or Caterpillar-catcher, as Gould calls it, was only seen in pairs near the coast, frequenting the lower trees in the Wakatimi jungle and the mangrove-swamps along the coast."—*C. H. B. G.*

Lalage karu polygrammica.

Lalage karu (Less. et Garn.); Hartert, N. Z. v. p. 525 (1898).

Lalage karu polygrammica Gray; Roths. & Hartert, N. Z. x. p. 210 (1903), xix. p. 202 (1912).

a. ♂. Launch Camp, Setakwa River, 14th Oct. 1912. [*C. B. K.*]

This adult male appears to be typical *L. k. polygrammica* from the Aru Islands. The type-specimen collected by Wallace is in the British Museum.

It ranges to the Kei Islands in the west and to British New Guinea as far as the Kumusi River and Milne Bay, in the east.

The typical form, *L. karu* (Less. et Garn.), occurs in New Ireland, where the type was obtained, also in Duke of York I., New Britain, Rook I., and the Louisiade Archipelago.

Birds from Fergusson I. and Goodenough I. seem to be somewhat intermediate between *L. karu* and *L. k. polygrammica* [*cf.* N. Z. v. p. 525], and, with the advent of more material, it may be necessary to separate them subspecifically.

Campochæra sloetii flaviceps.

Campochæra sloetii (Schleg.) ; Sharpe, Cat. iv. p. 21 (1879) ; Salvad. O. P. ii. p. 165 (1881) ; Ogilvie-Grant, P. & P. p. 280 (1912) ; id. Ibis, 1913, p. 92.

Campochæra sloetii flaviceps Salvad. ; Roths. & Hartert, N. Z. x. p. 209 (1903), xx. p. 499 (1913).

a, b. ♂ ♀. Wakatimi, Mimika River, 6th March, 1911. [Nos. 1100, 1101, *C. H. B. G.*]

c, d. ♀. Parimau, Mimika River, 28th Dec. 1910 & 4th Jan. 1911. [Nos. 857, 882, *C. H. B. G.*]

e, f. ♂ ♀. Launch Camp, Setakwa River, 15th Oct. 1912. [*C. B. K.*]

g-l. ♂ ♀. Canoe Camp, Setakwa River, 3rd-11th Dec. 1912 & 2nd Jan. 1913. [*C. B. K.*]

m. ♀. Camp 3, Utakwa River, 2500 ft., 6th Dec. 1912. [*C. B. K.*]

Iris dark brown ; bill and feet black.

There are no typical examples of *C. sloetii* (Schleg.), from Arfak, available for comparison with *C. s. flaviceps*, either in the British Museum or in the Tring Museum ; but a good figure and description of the former will be found under the name *Campephaga aurulenta* Selater (P. Z. S. 1873, p. 692, pl. liv.). His type-specimen came from Sorong, which lies a little north of Sele, the type-locality of *C. sloetii*, both places being situated in the extreme west of the Arfak Peninsula.

It will be seen that the adult male figured by Selater has the crown and nape entirely grey, whereas in the whole of the present series (thirteen specimens), at least the hinder part of the crown and occiput are greenish-yellow, and in some examples the yellow is continued over the crown to the forehead. Salvadori (*op. cit.*) subsequently placed his *C. flaviceps* as a doubtful synonym of *C. sloetii*, but it seems to be a tolerably distinct form.

The only example of this subspecies in the British Museum was a male of the present form from the Astrolabe Mountains procured by A. Goldie.

“This orange and black Cuckoo-Shrike was quite a common bird, both at Wakatimi and Parimau. It has

a most delightful clear whistle, which is often repeated several times. It was always observed on the topmost twigs of the tallest trees quite out of shot, and I wasted numbers of 12-bore cartridges in endeavouring to secure a series.

"It appeared to have much the habits of a Flycatcher, darting out to catch some passing insect and returning again to the same twig."—*C. H. B. G.*

***Edoliisoma melas*.**

Edoliisoma nigrum (Garn.) ; Sharpe, Cat. iv. p. 45 (1879).

Edoliisoma melas (Less.) ; Salvad. O. P. ii. p. 143 (1881) ; van Oort, p. 89 (1909) ; Roths. & Hartert, N. Z. x. p. 206 (1903), xx. p. 501 (1913).

Edoliisoma melas meeki Roths. & Hartert, N. Z. x. p. 207 (1903).

a-e. ♂ ♀ et ♂ imm. Wakatimi, Mimika River, 10th Jan. 1910–4th March, 1911. [Nos. 1000, 1544, *G. C. S.* ; 9, 1077, 1082, *C. H. B. G.*]

f, g. ♀ et ♂ imm. Upper Mimika River, 2nd April, 1910. [Nos. 1119, 1120, *G. C. S.*]

h-q. ♂ ♀. Parimau, Mimika River, 1st Sept.–25th Dec. 1910. [Nos. 78, 661, 684, 759, 761, 793, 822, *C. H. B. G.* ; 1487, 1511, *G. C. S.*]

r. ♀. White Water Camp, Kaparé River, 400 ft., 20th Oct. 1910. [No. 345, *C. H. B. G.*]

s, t. ♂ ♀. Iwaka River, 26th & 30th Jan. 1911. [Nos. 921, 960, *C. H. B. G.*]

u-v. ♀ et ♂ imm. Launch Camp, Setakwa River, 19th Oct.–1st Nov. 1912. [*C. B. K.*]

y-a'. ♂ ♀. Canoe Camp, Setakwa River, 6th Nov.–29th Dec. 1912. [*C. B. K.*]

All the specimens listed above seem to be true *E. melas*, and agree with typical examples from Dorei. The females of our series vary very considerably in the colour of both the upper- and underparts, some being more rufous above and less brown, others paler cinnamon below, and resembling the form which has been named *E. m. meeki* Roths.

& Hartert. I do not think that any great importance can be attached to these characters, which are partially due to age, the younger examples being redder. Females differ considerably *inter se*, and I cannot find any constant differences which would justify the recognition of more than one form. Further material is required before any final conclusion can be arrived at.

Two examples (Nos. 661 & 793) from Parimau are very richly coloured rufous birds with a marked cinnamon-rufous collar across the hind neck and rufous edges to the outer webs of the secondary quills: no doubt these individuals are not fully mature.

The young male from Launch Camp, Setakwa River, resembles the female, but has no cinnamon collar on the hind-neck, the tail-feathers are pointed, and the under mandible has the basal two-thirds pale yellowish-brown in the dry skin instead of black. Two males, No. 1082 and a bird from Launch Camp in partially mature plumage, are also interesting specimens and worthy of note.

The British Museum possesses two females of *E. melas* from Humboldt Bay, collected by Mr. W. Goodfellow.

The female of *E. m. tommasonis* Roths. & Hartert [N. Z. x. p. 206 (1903)], from Jobi Island, has the upperparts much brighter rufous, and is evidently distinct.

"This was one of the commonest of the Cuckoo-Shrikes, and was met with everywhere except on the coast. It was usually to be found in pairs, and frequented the middle branches of the larger trees and the tops of the smaller ones."—*C. H. B. G.*

Edoliisoma plumbea.

Edoliisoma tenuirostre Sharpe (nec Jard.), Cat. iv. p. 55 (1879) [part.].

Edoliisoma aruense Sharpe; id. Cat. iv. p. 52 (1879).

Edoliisoma amboinense mülleri Salvad.; Roths. & Hartert, N. Z. x. p. 208 (1903), xx. p. 500 (1913).

Edoliisoma amboinense aruensis Roths. & Hartert, N. Z. x. p. 209 (1903).

Edolisoma plumbea (Müll.); van Oort, p. 88 (1909).

a-m. ♂ ♀ et ♂ imm. Mouth of the Mimika River, 2nd Dec. 1910–23rd March, 1911. [Nos. 26, 89, 164, 168, 1184, 1153, 1188, 1206, 1207, 1214, 1215, 1245, *C. H. B. G.*]

n. ♂ imm. Launch Camp, Setakwa River, 20th Oct. 1912. [*C. B. K.*]

o. ♂ imm. Camp 6 A, Utakwa River, 2900 ft., 15th Jan. 1913. [*C. B. K.*]

Male. Iris dark brown ; bill and legs black. *Female.* Iris brown ; bill sooty-black ; feet very dark slate-colour.

The type-specimen of *Ceblepyris plumbea* Müller was procured on the Utanata River, and the birds listed above are undoubtedly referable to that species.

I agree with Dr. van Oort that Müller's name should be retained for this species, and that it is not invalidated by "*Ceblepyr. plumb.*" Wagler, a *nomen nudum* published in 1827 (*cf.* Syst. Av. *Corvus*, App. sp. 4). Count Salvadori, however, took a different view, and renamed the species *E. mülleri*, and Messrs. Rothschild and Hartert have followed him. The latter have kept up *Edoliisoma aruense* Sharpe, stating, however, that it is merely a slightly smaller form of *E. mülleri* (= *E. plumbea*). The specimen described by Sharpe from Lutor as the type-female of his *E. aruense* has the underparts chestnut or very deep fawn-colour, as in the female of *E. grayi* Salvad., from Batchian, etc. It appears to be very different from the females of *E. plumbea* and from the only female example we possess from the Aru Islands. In all these skins, nine in number, the ground-colour of the underparts is creamy-buff and quite unlike that described by Sharpe. Either two species, *E. plumbea* and *E. aruense*, are found in the Aru Islands, or else, as seems to me more probable, the female described by Sharpe is an abnormally dark-coloured specimen.

Five female specimens from the Aru Islands in the Tring Museum point to this conclusion, all having the underparts cream-coloured. Our specimens of *E. aruense* do not seem to be smaller than typical examples of *E. plumbea*, as stated by Messrs. Rothschild and Hartert, and I cannot see any reason for separating them.

Southern New Guinea.

Males.	Wing. mm.	Females.	Wing. mm.
(1)	111	(2)	114
(3)	113	(1)	115
(2)	115	(1)	117
(1)	116	(1)	119
(1)	117		
(1)	124		

Aru Islands.

(1)	117	(1)	126
-----------	-----	-----------	-----

It will be seen that there is considerable variation in size, but the differences are apparently individual.

Adult male examples of *E. plumbea* closely resemble males of *E. schisticeps*, but may be infallably recognised by the following characters: the lesser and median wing-coverts are black margined with grey, instead of grey; the greater secondary coverts are black, the outer webs margined with grey, instead of being uniform grey to the shaft; the 4th primary quill is longest and longer than the 5th, whereas in *E. schisticeps* the 3rd-5th quills are subequal.

One, an immature male, specimen *n*, from the Setakwa, is unusually large (wing 124 mm.): this specimen, together with one from the Utakwa River, and another immature bird (No. 1207) from the Mimika River, differ from the adult in having the feathers of the crown streaked with black; the throat is grey and the general colour both above and below paler grey.

Mr. Claude Grant says that on the Mimika this species was only noticed in the mangrove-swamps along the coast, where it was quite common, the adult birds being always observed in pairs. On the Utakwa River, however, it was found up to 2900 ft.

**Edoliisoma meyeri sharpei*?

Edoliisoma meyeri sharpei Roths. & Hartert, N. Z. x. p. 209 (1903), xx. p. 501 (1913).

Edolisoma meyeri sharpei van Oort, p. 89 (1909).

This form, described by Messrs. Rothschild and Hartert

from a single male example from the north coast of Dutch New Guinea, is again recorded by the same authors from the Upper Setakwa River and Utakwa River, 2000-3000 ft., and again from male specimens only. Dr. van Oort also records a male from the Noord River, identified by Dr. Hartert, under the same name.

The male of *E. meyeri* Salvad., from which *E. m. sharpei* seems to differ chiefly in its smaller size, is practically indistinguishable from the male of *E. plumbea*, though the females of the two species are very different. Of the latter species, *E. plumbea*, I have received a series including specimens from the Utakwa and Setakwa Rivers, together with females, and it seems probable that the specimens named *E. m. sharpei* from Southern New Guinea should really have been referred by Dr. van Oort and Messrs. Rothschild and Hartert to *E. plumbea* (cf. p. 122).

***Eboliisoma schisticeps poliopse*.**

Eboliisoma poliopse Sharpe, J. Linn. Soc., Zool. xvi. pp. 318 & 433 (1882) [Moroka, Astrolabe Mts.].

Eboliisoma schisticeps poliopse van Oort, p. 88 (1909); Roths. & Hartert, N. Z. x. p. 208 (1903), xx. p. 500 (1913).

Eboliisoma schisticeps van Oort (nec G. R. Gray), p. 88 (1909).

a, b. ♂ ♀. Parimau, Mimika River, 27th Nov. 1910. [Nos. 592, 593, *C. H. B. G.*]

c. ♂. White Water Camp, Kaparé River, 2nd Nov. 1910. [No. 426, *C. H. B. G.*]

d. ♂. Wataikwa River, 30th Sept. 1910. [No. 1283, *G. C. S.*]

e, f. ♂ ♀. Iwaka River, 31st Jan. & 1st Feb. 1911. [Nos. 963, 975, *C. H. B. G.*]

g, h. ♂ ♀. Canoe Camp, Setakwa River, 25th Nov. & 22nd Dec. 1912. [*C. B. K.*]

i-l. ♂. Camp 3, Utakwa River, 2500 ft., 22nd Nov.-23rd Dec. 1912. [*C. B. K.*]

Iris dark brown; bill and feet black.

Total length in the flesh 222 mm. ($= 8\frac{3}{4}$ inches).

As mentioned above, adult males of this species closely resemble males of *E. plumbea*, but may be at once recognised by the characters referred to above, viz. the grey lesser and median wing-coverts, grey outer webs of the greater secondary coverts, and the shape of the wing with the 3rd, 4th, and 5th primary quills subequal. The chestnut female, with its head, cheeks, and chin grey, is very distinct from the female of *E. plumbea*. An immature female has the grey of the crown washed with chestnut and the ear-coverts and hinder-parts of the cheek mostly rufous instead of grey; also the chin and upper throat are pale rufous-buff, and the greater primary wing-coverts are margined at the tip with buff.

Most of the specimens in the collection are in moult.

The typical form, *E. schisticeps*, appears to be confined to Misol, and no doubt the male from Etna Bay referred to that species by Dr. van Oort is referable to the present subspecies.

"This is not a common bird; in the mountains it was observed in small parties probably consisting of old and young."—*C. H. B. G.*

***Edoliisoma incertum*.**

Edoliisoma incertum (Meyer); Sharpe, Cat. iv. p. 52 (1879); Salvad. O. P. ii. p. 152 (1881); Roths. & Hartert, N. Z. xx. p. 501 (1913).

a. ♀. Iwaka River, 12th Feb. 1911. [No. 1034, *C. H. B. G.*]

A female of this obscure species is a welcome addition to the National Collection, where it was not previously represented. It is remarkable in being bluish-grey, almost similar to the male in plumage. Of the middle pair of tail-feathers the left is missing, but the right is grey with a small black subterminal spot on the shaft; the second pair are grey with black tips, and there is some grey on the basal half of the outer web of the third pair.

Specimens of *E. schisticeps poliopse* were procured in the same locality, Iwaka River, and males closely resemble this female of *E. incertum* in general appearance, but the latter is easily recognised by its much stouter bill.

***Edoliisoma montanum*.**

Edoliisoma montanum (Meyer); Sharpe, Cat. iv. p. 46 (1879); Roths. & Hartert, N. Z. x. p. 207 (1903); van Oort, p. 89 (1909).

Edoliisoma montanum minus Roths. & Hartert, N. Z. xiv. p. 464 (1907), xx. p. 500 (1913).

Edoliisoma utakwensis Ogilvie-Grant, Bull. B. O. C. xxxi. p. 105 (1913) [♀ imm.].

a. ♂ imm. Camp 6 B, Utakwa River, 4200 ft., 27th Jan. 1913. [C. B. K.]

b, c. ♂. Camp 6 c, Utakwa River, 5500 ft., 18th & 25th Feb. 1913. [C. B. K.]

d. ♀ imm. Camp 9, Utakwa River, 5500 ft., 30th Jan. 1913. [C. B. K.] (Type of *E. utakwensis*.)

Messrs. Rothschild and Hartert have separated the race found in South-east New Guinea under the name *E. m. minus*, and to this smaller race they have referred specimens from Mount Goliath. As the difference is merely a matter of size, and as larger individuals from South-east New Guinea are indistinguishable from typical *E. montanum* from the Arfak Mountains, I prefer to keep all under that heading.

The following are the measurements of examples in the British Museum:—

	Wing mm.		Wing mm.
♂. Arfak	135	♀. Utakwa R.....	135
♂. Utakwa R.	132	♀. Owen Stanley Mts.	120
(2) ♂. Utakwa R.	129	♀. Owen Stanley Mts.	124
(2) ♂. Owen Stanley Mts...	126	♀. Owen Stanley Mts.	127
♂. Owen Stanley Mts...	128		
♂. Owen Stanley Mts...	131		
♂. Astrolabe Mts.	132		
♂. Astrolabe Mts.	134		

An immature female with dark shaft-streaks to all the feathers of the grey plumage of the upper- and underparts has been described by me as a new species under the name *E. utakwensis*: I now see that it must be a younger example of *E. montanum*, with which I have united it.

***Graucalus melanops*,**

Graucalus melanops (Lath.) ; Sharpe, Cat. iv. p. 30 (1879); van Oort, p. 87 (1909).

a. ♂ imm. Kamura River, 17th May, 1910. [No. 1154, *G. C. S.*]

Iris dark brown ; bill and feet black. Total length in the flesh 33 cm.

A young male appears to be of this species. The wing measures 190 mm.

***Graucalus papuensis*.**

Graucalus papuensis (Gmel.) ; Sharpe, Cat. iv. p. 39 (1879).

Coracina p. papuensis Roths. & Hartert, N. Z. x. p. 205 (1903), xx. p. 500 (1913).

a-k. ♂ ♀. Mouth of the Mimika River, 29th Nov. 1910–14th March, 1911. [Nos. 8, 46, 92, 111, 116, 129, 140, 167, 1159, 1161, *C. H. B. G.*]

l. ♀. Upper Mimika River, May 1910. [*W. G.*]

m-o. ♂ ♀. Launch Camp, Setakwa River, Oct. & 8th Nov. 1912. [*C. B. K.*]

Iris dark brown ; bill black ; feet very dark slate-colour.

All these birds belong to the typical *G. papuensis*, of which the chief distinctive characters usually present are the grey chin and throat, the absence of distinct white margins to the secondary quills, and the darker grey breast and sides of the body. The tail in typical examples from South-western New Guinea and the Arfak Peninsula is rather short and varies from 100–112 mm. Examples from the western Islands of Salawatti, Misol, Obi, Batchian, Ternate, and Gilolo have the tail somewhat longer and the measurements vary from 114–131 mm. It does not seem possible to separate these island-birds from those from the mainland of New Guinea, but should one desire to do so, several names are available. Birds from the Kumusi River, North-east New Guinea, have been separated as *G. papuensis meekiana* (Roths. & Hartert) ; those from Cooktown, North-east Queensland, have been named *G. hypoleucus stalker* Mathews. Both

these forms have the throat white and appear to me inseparable from typical *G. hypoleucus* from New South Wales. If kept separate on account of the pale grey breast, which is a very variable character, they should in any case stand as *G. h. angustifrons* Sharpe, which was described from Port Moresby [J. Linn. Soc., Zool. xiii. pp. 81, 499 (1878)].

It is remarkable that birds from the Aru Islands are referable to the white-throated *G. hypoleucus* (or *G. h. angustirostris*) and not to the present species. Females of *G. papuensis* are rather smaller than males, and may be further distinguished by having the forehead and lores dull brownish black instead of jet-black.

"This Cuckoo-Shrike was only observed on the coast, where it was quite plentiful in the mangrove-swamps. It was seen in pairs, and those obtained in March were shot in a tree overhanging the tents."—*C. H. B. G.*

***Graucalus longicauda.**

Graucalus longicauda De Vis ; Roths. & Hartert, N. Z. x. p. 204 (1903).

Coracina longicauda Roths. & Hartert, N. Z. xx. p. 500 (1913).

A. S. Meek procured an adult male on Mount Goliath.

***Graucalus lineatus.**

Graucalus lineata (Swains.) ; van Oort, p. 87 (1909).

An adult is recorded from Merauke, and according to Dr. van Oort is new to the fauna of New Guinea.

Graucalus subalaris.

Graucalus subalaris Sharpe ; id. Cat. iv. p. 26 (1879) ; Salvad. O. P. ii. p. 125 (1881).

a-c. ♂ ♀ et ♂ imm. Parimau, Mimika River, 17th Nov. & 17th Dec. 1910. [Nos. 1525, *G. C. S.* ; 510, 775, *C. H. B. G.*]

d. ♂. Wataikwa River, 29th Oct. 1910. [No. 1454, *G. C. S.*]

e-g. ♂ ♀. Canoe Camp, Setakwa River, 24th & 25th Nov. 1912. [*C. B. K.*]

Iris very dark brown ; bill and legs black.

Total length in the flesh 267 mm. ($=10\frac{1}{2}$ inches).

This perfectly distinct form was described by Sharpe in 1878 from specimens procured by D'Albertis on the Fly River, and the type-specimens are preserved in the Genoa Museum. Since that date *G. subalaris* has been frequently confused with *G. boyeri* Gray, though in his original description Sharpe clearly pointed out the marked differences between the females of the two species, the lores in *G. subalaris* being bluish-grey like the sides of the head and throat, whereas in *G. boyeri* they are pure white. In 1879 and 1880 Sharpe received two male examples from Port Moresby which he rightly referred to *G. subalaris*, evidently noting their paler under wing-coverts and axillaries, which constitute the principal differences between that bird and *G. boyeri*. Messrs. Rothschild and Hartert [N. Z. x. p. 204 (1903), and xix. p. 201 (1912)] referred specimens from Kumusi River, Collingwood Bay, and Milne Bay to *G. subalaris*, but those from the two first-named localities are certainly typical *G. boyeri*, while those from Milne Bay, where males only were procured, are almost as certainly referable to *G. subalaris*, having paler cinnamon under wing-coverts and axillaries. This caused their difficulty in distinguishing the two forms, and accounts for their statement that *G. subalaris* can "hardly even rank as a subspecies."

There are no female examples of *G. subalaris* in the Tring Museum.

The range of the species seems to include the whole of the south coast from the Mimika River to Mullin's Harbour and Milne Bay in the extreme south-east of New Guinea. *G. boyeri* ranges from the Arfak Peninsula along the north coast to the Kumusi River and Collingwood Bay.

The plate of *G. strenua* given by Gould [B. N. Guinea, ii. pl. iii. (1876)] is evidently not of that species but represents a male of *G. boyeri* ; the text, however, refers to *G. strenua* Schlegel, which is synonymous with *G. ceruleogriseus* Gray, and also inhabits Western New Guinea. There is evidently some mistake about the total length given, viz. 6.6 ins. ;

G. boyeri measuring about 10·5 ins. and *G. cæruleogriseus* about 14·0 ins.

This is a new and important addition to the collection in the British Museum.

A young male resembles the female, but the feathers at the base of the bill and the lores are blackish, likewise those at the base of the lower mandible and point of the chin.

Graucalus cæruleogriseus.

Artamides cæruleogriseus (Gray) ; Sharpe, Cat. iv. p. 15 (1879).

Graucalus cæruleogrisea van Oort, p. 87 (1909).

Coracina cæruleogrisea Roths. & Hartert, N. Z. x. p. 203 (1903), xx. p. 499 (1913).

a. ♂. Parimau, Mimika River, 7th Jan. 1911. [No. 889, *C. H. B. G.*]

b, c. ♂ ♀. Wataikwa River, 7th Oct. 1910. [Nos. 1323, 1324, *G. C. S.*]

d-h. ♂ ♀. Iwaka River, 22nd Jan.—11th Feb. 1911. [Nos. 899, 924, 934, 985, 1021, *C. H. B. G.*]

i-o. ♂ ♀ et ♀ imm. Camp 3, Utakwa River, 2500 ft., 28th Nov. 1911—11th Jan. 1913. [*C. B. K.*]

Iris dark brown ; bill and feet black or slate-black.

Total length in the flesh 362 mm. ($=14\frac{3}{4}$ inches).

Young females have the bastard wing, greater primary wing-coverts (not tail-coverts, as stated in N. Z. xx. p. 499), and quills rather pointed and narrowly edged with pale buff ; the rectrices pointed and tipped with white.

The type of this species, a female from the Aru Islands procured by Wallace, is in the British Museum.

“The Great Cuckoo-Shrike appeared to be rather scarce in the low coastal country, but was quite plentiful in the mountains. It was seen in pairs, which frequented the tops of the trees. On more than one occasion, when one of a pair was shot, the other bird came down to it on the ground and often remained within a few feet of the collector,”—*C. H. B. G.*

Family MUSCICAPIDÆ.

Peltops blainvillei.

Peltops blainvillei (Lesson & Garnot) ; Sharpe, Cat. iv. p. 433 (1879) ; Roths. & Hartert, N. Z. x. p. 454 (1903).

Peltops minor De Vis, Ann. Rep. Brit. N. Guinea, July 1893 to June 1894, App. EE, p. 100 (1894).

a. ♀. Mimika River, May 1910. [W. G.]

b-e. ♂ ♀. Wakatimi, Mimika River, 21st & 25th Nov. 1910-7th March, 1911. [Nos. 1531, 1532, 1548, *G. C. S.* ; & 1115, *C. H. B. G.*]

f. ♂. Parimau, Mimika River, 12th Nov. 1910. [No. 1499, *G. C. S.*]

g. ♂. Launch Camp, Setakwa River, 21st Oct. 1912. [*C. B. K.*]

h, i. ♂. Camp 6 A, Utakwa River, 2900 ft., 12th Jan. 1913. [*C. B. K.*]

k, l. ♀ et imm. Camp 6 B, Utakwa River, 4200 ft., 3rd & 4th Feb. 1913. [*C. B. K.*]

Iris crimson ; bill and legs black.

Total length in the flesh—male 190-205, female 183-203 mm.

Specimen *l*, an immature bird, has the bill much shorter than in the adult ; the white tufts on the hind-part of the cheeks and ear-coverts much less developed, and the greater secondary coverts tipped with white. Otherwise the plumage resembles that of the adult.

“Though by no means plentiful, the Broad-billed Flycatcher was observed from the coast belt to the furthest point reached in the mountains.

“It was usually seen singly, and was generally perched on some conspicuous position, a habit shared by some of the African Barbets, of which this species at once reminded me. I did not hear it call.”—*C. H. B. G.*

Monarcha periophthalmica.

Monarcha periophthalmica Sharpe, J. Linn. Soc., Zool. xvi. pp. 318 & 430 (1882) ; id. in Gould, Birds N. Guinea, ii. pl. 52 (1883) ; Roths. & Hartert, N. Z. x. p. 455 (1903).

a-d. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 8th-19th Jan. 1913. [*C. B. K.*]

The type of this species, which is in the British Museum, was obtained by A. Goldie in the Astrolabe Mountains; it agrees in every respect with the specimens procured by the Wollaston Expedition on the Utakwa River. The amount of black on the forehead varies individually: in some examples it does not extend much beyond the anterior border of the eye, as in the type-specimen from the Astrolabe Mountains and the male (*a*) from the Utakwa River; in other specimens from South-east New Guinea the black is much more extensive, reaching considerably beyond the posterior margin of the eye. Again, in some examples, both male and female, the black on the crown terminates posteriorly in numerous black spots which, in one specimen, extend almost to the occiput. This variation is probably due to age, the spots denoting the younger birds.

The male (*a*) has the rufous-chestnut of the breast and underparts darker than in the three females (*b-d*).

1 male, wing 85.5 mm. ; 3 females, wing 80, 83, 83 mm.

Monarcha chrysomelas aruensis.

Piezorhynchus aruensis (Salvad.) ; Sharpe, Cat. iv. p. 428 (1879).

Monarcha c. aruensis Roths. & Hartert, N. Z. x. p. 459 (1903).

a. ♂. Wakatimi, Mimika River, 1st Jan. 1911. [No. 215, *C. H. B. G.*]

b, c. ♂ et ♂ imm. Launch Camp, Setakwa River, 30th Oct. & 8th Nov. 1912. [*C. B. K.*]

d, e. ♂ ♀. Canoe Camp, Setakwa River, 19th Nov. & 28th Dec. 1912. [*C. B. K.*]

Female. Iris dark brown; upper mandible black, lower plumbeous; feet plumbeous.

Birds from the Mimika and Setakwa Rivers are referred with some doubt to the Aru Island form. The males of our series and *M. c. aruensis* appear to be indistinguishable from one another, but the female from the

Setakwa River has the yellow of the underparts continued over the chest and lower throat; whereas in females of *M. c. aruensis*, with one exception, the lower throat, chest, and sides are strongly washed with olive-green. Females from Kotoi River, Milne Bay, Fergusson and Goodenough Islands, also agree with the Setakwa bird and differ from typical *M. aruensis* as a whole. The advent of further specimens may show that birds from Southern New Guinea should be separated from Aru birds.

The wing-measurements of specimens of the various forms of *Monarcha chrysomelas* are as follows:—

<i>M. chrysomelas</i> Less. ..	{ New Ireland, ♂ (2), 74 mm. New Hanover, ♂, 77 mm.
<i>M. c. kordensis</i> Meyer ..	{ Misori I., Geelvink Bay, ♂, 77 mm. Kordo, ♂, 77 mm.
<i>M. c. aurantiacus</i> Meyer.	{ Wensudu, North New Guinea, ♂, 70 mm. Takar, ♂ (2), 73 mm. Stephansort, ♂, 74 mm.
<i>M. c. melanonotus</i> Selater	{ Arfak, ♂, 73 mm. Misol, ♂, 73; (3) 75 mm. Waigiu, ♂, 75 mm.
<i>M. c. aruensis</i> Salvad. ..	{ Aru Islands, ♂, (2) 67; (2) 68; (8) 69 mm. Mimika River, ♂, 69 mm. Setakwa River, ♂, 70, 73 mm.

***Monarcha* sp. inc.**

a. ♂. Canoe Camp, Setakwa River, 9th Dec. 1912.
[C. B. K.]

This specimen appears to be in immature plumage, and I am at present unable to place it. The whole of the upper-parts are very dark slate-black with a purplish gloss; throat and upper part of the chest blackish-grey; breast rufous-chestnut becoming whitish on the middle of the belly; longer under tail-coverts black with whitish tips. Wing 74 mm.; tail (imperfect) 72 mm.

***Monarcha guttula*.**

Piezorhynchus guttulatus (Salvad.); Sharpe, Cat. iv. p. 422 (1879).

Monarcha guttula (Garnot); van Oort, p. 87 (1909); Roths. & Hartert, N. Z. x. p. 456 (1903), xx. p. 493 (1913).

a. ♀. Wakatimi, Mimika River, 10th March, 1911.
[No. 1134, *C. H. B. G.*]

b-d. ♂ ♀. Upper Mimika River, 5th & 15th Feb. and 1st May, 1910. [Nos. 1031, 1061, 1144, *G. C. S.*]

e-f'. ♂ ♀ et ♂ imm. Parimàn, Mimika River, 27th Aug.-30th Dec. 1910. [Nos. 27, 49, 85, 237, 238, 245, 256, 264, 633, 634, 653, 668, 688, 689, 694, 695, 722, 733, 773, 841, 859, 878, *C. H. B. G.*; 1471, 1491, 1495, 1501, 1506, 1507, *G. C. S.*]

g', h'. ♂ ♀. White Water Camp, Kaparé River, 1500 ft., 2nd Nov. 1910. [Nos. 419, 424, *C. H. B. G.*]

i', k'. ♂ ♀. Wataikwa River, 14th & 25th Oct. 1910. [Nos. 1367, 1431, *G. C. S.*]

l'-s'. ♂ ♀ et ♂ imm. Launch Camp, Setakwa River, 6th Oct.-2nd Nov. 1912. [*A. F. R. W. & C. B. K.*]

t'-x'. ♂. Canoe Camp, Setakwa River, 31st Oct.-3rd Dec. 1912. [*C. B. K.*]

y'. ♀. Camp 3, Utakwa River, 2500 ft., 20th Dec. 1912. [*C. B. K.*]

z', a². Two nestlings in spirits: with parents, Nos. 633 & 634.

Iris brown; bill and feet slate-blue.

In this species the plumage of the sexes appears to be quite alike, but the males are somewhat larger, on the whole, as the following measurements will show.

In eight males the wings measure:—79; (2) 80; 81 (2) 82; 83; 85 mm.

In eight females the wings measure:—75; (3) 76; (2) 77; (2) 78 mm.

Young birds have the upper part of the breast pale rufous-buff and the sides tinged with the same colour. In this plumage the species was described by Gray from the Aru Islands as *M. griseogularis*.

In the British Museum there is an obviously immature specimen procured by J. M. Dumas in North New Guinea, probably in the vicinity of Humboldt Bay, which has been referred to this species. It resembles the young of *M. guttula* in all points except that the upper breast is bright reddish-

chestnut, and the sides are tinged with the same colour. It is perhaps the young of some allied form.

Two eggs of this species were obtained at Parimàu on the 14th of December, 1910, with one of the parent birds, No. 722.

The eggs are of a rather pointed oval shape and somewhat glossy, the ground is white densely spotted and dotted all over the shell with light maroon-red and purplish-grey, the markings being, however, most numerous towards the larger end. They measure respectively 23×16.5 , 22×16 mm.

"The Spot-winged Flycatcher was quite a common bird everywhere, and several nests were found at Parimàu, though only two were occupied. The nests were found in the depths of the jungle and built in the fork of a small sapling about four feet from the ground. They were deeply cup-shaped and composed of green moss lined with fine rootlets. The parent birds, which were quite tame, were secured on both occasions."—*C. H. B. G.*

***Monarcha menadensis*,**

Piezorhynchus dichrous (Gray); Sharpe, Cat. iv. p. 421 (1879).

Monarcha menadensis (Quoy & Gaim.) ; Roths. & Hartert, N. Z. x. p. 458 (1903), xx. p. 493 (1913).

a. ♀ imm. Mimika River, 26th March, 1910. [No. 1105, *G. C. S.*]

b-g. ♂ ♀. Parimàu, Mimika River, 23rd Sept.–26th Dec. 1910. [Nos. 1502, *G. C. S.*; & 236, 570, 724, 840, 842, *C. H. B. G.*]

h-k. ♂ ♀. Wataikwa River, 16th & 25th Oct. 1910. [Nos. 1382, 1432, 1433, *G. C. S.*]

l-q. ♂ ♀. Launch Camp, Setakwa River, 14th–30th Oct. 1912 & 30th March, 1913. [*C. B. K.*]

r, s. ♂ et ♂ imm. Canoe Camp, Setakwa River, 19th Nov. 1912. [*C. B. K.*]

Iris brown; bill and feet bluish-slate-colour.

This species was erroneously stated by Quoy & Gaimard to have come from Menado, Celebes.

The type of *M. dichroa* Gray is in the British Museum, and was procured by Wallace at Dorei, Geelvink Bay, which has been fixed as the type-locality.

Owing to the variation in the length of the wing, Messrs. Rothschild & Hartert share Count Salvadori's belief that in the fully adult stage the female has the upperparts black as well as the male. I feel sure, however, that this is a mistake, as our extensive series of specimens, as well as those in the Tring Museum collected by A. S. Meek, point to an exactly opposite conclusion. Individuals undoubtedly vary considerably in size, as the following measurements will show.

In 12 males listed above the wing measures (3) 82, 83; (4) 84, 85, 86, 87, 88 mm.

In four females listed above the wing measures 80, 81, 82, 83 mm.

Other specimens in the British Museum measure :—

One male, Amberbaki, wing 87 mm.

One male, Dorei (type of *M. dichroa*), wing 82 mm.

One male, Kumusi River, wing 82 mm.

One female, Amberbaki, wing 81 mm.

One female, Collingwood Bay, wing 80 mm.

The young female (No. 1105) has all the feathers on the chin and throat grey with dark middles, and the forehead dark slate-grey like the crown; in the adult female these parts are black.

Two eggs of this species are of a somewhat pointed oval shape and are almost devoid of gloss. The shell is white marked all over with dots and small spots of light red and purplish-grey; these become larger and much more numerous round the larger end, where they form an irregular cap or zone. They measure respectively 24.5×17 , 24.5×16.5 mm.

"This Black and White Flycatcher was by no means plentiful, and was generally observed among the lower branches and undergrowth. A nest taken on the 23rd of September, 1910, was built in the fork of a sapling situated in the depths of the jungle, and placed some four feet above the ground. It was a deep cup composed of green moss and lined with fine dark rootlets. It contained two eggs. The

parent birds were both present and remained close to me, uttering a sharp 'cheeping' note. Eventually one of the birds, the male (No. 236), returned to the nest."—*C. H. B. G.*

Monarcha rubiensis.

Piezorhynchus rubiensis (Meyer); Sharpe, Cat. iv. p. 417 (1879).

Monarcha rubiensis Roths. & Hartert, N. Z. x. p. 460 (1903), xx. p. 493 (1913).

a. ♂. Upper Mimika River, 2nd Feb. 1910. [No. 1015, *G. C. S.*]

b-k. ♂ ♀. Parimau, Mimika River, 27th Aug.—30th Nov. 1910. [Nos. 1496, *G. C. S.*; 20, 25, 98, 100, 269, 618, 619, 620, *C. H. B. G.*]

l-s. ♂ ♀. Wataikwa River, 27th Sept.—24th Oct. 1910 & 11th Feb. 1911. [Nos. 1262, 1319, 1388, 1422, 1423, 1424, 1425, *G. C. S.*; & 620 A, *C. H. B. G.*]

t-v. ♂ ♀. Canoe Camp, Setakwa River, 30th Oct.—8th Dec. 1912. [*C. B. K.*]

Iris dark brown; bill slate, with the terminal half of the upper mandible black; feet slate-blue.

Total length in the flesh 203 mm. (=8 inches).

In the most adult males the forehead is rufous-chestnut, in marked contrast to the crown which is greyish-brown, and to the back which is more rufous-brown. In younger males the crown lacks the greyish tinge and is of a reddish-brown, nearly the same colour as the back.

In two apparently aged females (Nos. 100 & 618) there is an indistinct dusky patch on the chin and upper part of the throat, indicating a partial assumption of male plumage.

In young males and females the bill is differently coloured, the upper mandible being black and the lower bluish at the tip, and yellowish buff at the base. This difference is easily perceptible in the dried skins.

The type-locality of this species is Rubi, Geelvink Bay. The Museum contained only one female example from Northern New Guinea, procured by J. M. Dumas, probably

near Humboldt Bay. This specimen has a somewhat larger and longer bill than any of those listed above, but resembles them in other respects.

"This Black-throated Chestnut Flycatcher was probably common, though not met with near the coast. Like *M. menadensis*, it frequents the lower branches and undergrowth."
—C. H. B. G.

***Monarcha chalybeocephalus*.**

Piezorhynchus alecto (Temm.); Sharpe, Cat. iv. p. 415 (1879).

Monarcha c. chalybeocephalus (Garn.); Roths. & Hartert, N. Z. x. p. 457 (1903), xix. p. 199 (1912).

a-e. ♂ ♀. Mouth of the Mimika River, 2nd Dec. 1910–16th March, 1911. [Nos. 30, 35, 94, 113, 1181, C. H. B. G.]

f-i. ♂ ♀ et ♂ imm. Wakatimi, Mimika River, 23rd Aug. 1910–12th March, 1911. [Nos. 13, 202, 216, 1146, C. H. B. G.]

Male. Iris dark brown; bill dark bluish-slate-colour; feet slate-black.

This species was first described from New Ireland under the above name [Garnot, Voy. 'Coquille,' Zool. i. p. 589, pl. xv. fig. 1 (1826)], and subsequently as *Drymophila alecto* from Celebes [Temminck, Pl. Col. pl. 430. fig. 1 (1827)]. Though found all along the coastal districts of New Guinea and the adjacent islands, it does not appear to occur in the Aru Group, where its place is taken by *M. rufolateralis* Gray. The female of this latter form has the nape and upper mantle dark blackish-grey and the back, wings, and tail darker chestnut; whereas in *M. chalybeocephalus* all these parts are bright rufous-chestnut with only the nape dark greyish-black. The Aru bird has been united by Sharpe with *M. nitidus* (Gould) from Port Essington, Australia, etc. and with the birds from Tenimber Islands; but though nearly allied, the females are probably separable. To study this question properly, however, more material is required. The Tenimber birds seem to have the tail somewhat longer

than typical *M. nitidus*, about 80–82 mm. as compared with 72–76 mm.

No. 13, a young male, is in partial female plumage, with several black tail-feathers and under tail-coverts on the right side.

“The species was only observed near the coast. It frequented the undergrowth, the lower trees, and the mangrove-swamps.”—*C. H. B. G.*

Monarcha axillaris.

Piezorhynchus axillaris (Salvad.) ; Sharpe, Cat. iv. p. 426 (1874).

Monarcha axillaris Salvad. O. P. ii. p. 30 (1881) ; Roths. & Hartert, N. Z. x. p. 465 (1903), xiv. p. 462 (1907), xx. p. 493 (1913).

Rhipidura fallax Ramsay, P. Z. S. 1884, p. 580 [Astrolabe Range].

a. ♂. Camp 6 c, Utakwa River, 5500 ft., 18th Feb. 1913. [C. B. K.]

This specimen and others from South-east New Guinea appear to differ somewhat from a typical example of *M. axillaris* from the Arfak Mountains, in having the belly washed with grey, but a close examination shows that this apparent difference is due chiefly to the way in which the skin has been made up. The bird from Arfak in the British Museum seems to have the white patches on the sides of the breast, formed by the axillaries, and feathers on the sides of the body larger ; it also has well-marked white tips to the lateral under tail-coverts.

It is possible that further material may indicate that the eastern form should be kept separate, and, in that case, it would have to bear the name *M. fallax* (Ramsay). *Rhipidura fallax* of Ramsay has been attributed, by Messrs. Rothschild & Hartert, to *R. atra* Salvad. ; but it is evidently not a *Rhipidura*, and the description given by Ramsay can only apply to *Monarcha axillaris* or a close ally. *R. fallax* is said to be black, slightly glossy, with no trace of white over the eye,

and with the apical half of the under wing-coverts and axillaries silky-white. The length of the tarsus in *M. axillaris*, 18.5 mm. (=0.7 inch), also agrees with Ramsay's description of *R. fallax*.

Salvadori, Agg. O. P. p. 80 (1890) keeps up *Rhipidura fallax* Ramsay as a species, and considers *R. cinnamomea* Meyer to be the female of it. This is certainly an error, as *R. cinnamomea* is, no doubt, a true *Rhipidura*, and apparently founded on a female of *R. atra* [cf. Meyer, Zeit. ges. Orn. iii. p. 17, pl. iii. fig. 3 (1886), and Büttikofer, Notes Leyden Mus. xv. p. 74 (1893)].

****Arses telescopthalmus*.**

Arses telescopthalmus (Garnot); Sharpe, Cat. iv. p. 409 (1879); van Oort, p. 86 (1909); Roths. & Hartert, N. Z. x. p. 460 (1903).

A male from Etna Bay is recorded by Dr. van Oort.

The female is easily recognisable from that of *A. t. aruensis* Sharpe by the bright chestnut mantle and edges of the quills.

Another close ally, *A. t. henkei* Meyer (cf. Roths. & Hartert, t. c. p. 461), is found in British New Guinea. The male has less black on the chin and the female generally has the belly, flanks, and under tail-coverts washed with pale cinnamon, but there seems to be no difference between the two in the colour of the upperparts, which are equally bright chestnut.

***Arses telescopthalmus aruensis*.**

Arses aruensis Sharpe, Cat. iv. p. 410 (1879).

Arses telescopthalmus harterti van Oort, p. 86 (1909); id. Notes, xxxii. p. 81 (1910); Roths. & Hartert, N. Z. xx. p. 494 (1913).

a-c. ♂ ♀ et ♀ imm. Wakatimi, Mimika River, 1st Jan.-10th March, 1911. [Nos. 204, 1097, 1138, *C. H. B. G.*]

d-g. ♂ ♀. Parimau, Mimika River, 6th Sept.-27th Dec. 1910. [Nos. 148, 189, 203, 258, 548, 666, 667, 676, 686, 687, 693, 785, 851, *C. H. B. G.*]

r, s. ♂ ♀. White Water Camp, Kaparé River, 8th Nov. 1910. [Nos. 452, 464, *C. H. B. G.*]

t. ♂. Wataikwa River, 25th Oct. 1910. [No. 1429, *G. C. S.*]

u-w. ♂ ♀. Iwaka River, 28th Jan. & 11th Feb. 1911. [Nos. 952, 1022, 1025, *C. H. B. G.*]

x-z. ♂ ♀. Launch Camp, Setakwa River, 14th-23rd Oct. 1912. [*C. B. K.*]

a'-g'. ♂ ♀. Canoe Camp, Setakwa River, 19th Nov. 1912-2nd Jan. 1913. [*C. B. K.*]

h'. ♀. Camp 3, Utakwa River, 2500 ft., 20th Dec. 1912. [*C. B. K.*]

Iris dark brown; eye-wattle bright cobalt-blue or electric blue; bill lavender-blue; feet bluish-slate-colour.

Birds from Southern Dutch New Guinea have been separated from *Arses telescopthalmus* (Garrot), from the Aru Islands, on account of their somewhat longer wing-measurement and a supposed difference in the colour of the upperparts in the female. It should, however, be noted that the female specimens described by Dr. van Oort as *A. t. harterti*, with the back, rump, wings, and tail duller olive-brown, were obtained in June and July, and are no doubt in worn plumage, as also are those procured by A. S. Meek during July and August on the Setakwa River. Among the series listed above there are some females in worn plumage killed in October, January, and February, which for some reason have not yet moulted, and which appear browner above; but others in fresh plumage seem to be indistinguishable from Aru birds. I can find no difference in the development of the wattle, a character put forward by Dr. Hartert. On the whole, birds from Southern New Guinea are slightly larger than typical *A. t. aruensis* from the Aru Islands, but, as the following measurements of a large series will show, the difference is so very slight that it does not seem advisable to recognise *A. t. harterti* subspecifically.

The Museum is indebted to Mr. W. Goodfellow for four pairs of this bird from the Aru Islands collected between February and April.

Aru Islands.

13 males (wing-measurement in mm.):—(2) 76; (2) 78; (2) 79; 6 (80); (1) 82. Average 79 mm.

10 females (wing-measurement in mm.):—(1) 71; (1) 73; (1) 74; (2) 75; (1) 75·5; (2) 76; (1) 77; (1) 78. Average 75 mm.

Southern Dutch New Guinea.

17 males (wing-measurement in mm.):—(2) 78; (1) 78·5; (1) 79; (1) 80; (4) 81; (3) 82; (2) 84; (1) 85·5; (2) 87. Average 83·5 mm.

15 females (wing-measurement in mm.):—(1) 73; (2) 74; (1) 76; (2) 77; (1) 78; (3) 79; (3) 80; (2) 81. Average 78 mm.

Specimen No. 204, which appears to be an immature female, has the basal part of the lower mandible yellowish-white, the chin and upper throat pale cinnamon-buff, and the greater wing-coverts perhaps more clearly margined with rufous.

“This handsome Pied Flycatcher was observed everywhere, and usually in pairs. It has a loud and rather harsh call-note, and when seen at close quarters the male looks rather quaint with the white ruffle encircling its head.”
—C. H. B. G.

Machærorhynchus xanthogenys.

Machærorhynchus xanthogenys G. R. Gray; Sharpe, Cat. iv. p. 391 (1879).

Machærorhynchus flaviventer xanthogenys Roths. & Hartert, N. Z. xix. p. 201 (1912), xx. p. 498 (1913).

a. ♂. Canoe Camp, Setakwa River, 22nd Nov. 1912.
[C. B. K.]

The type-specimen of *M. xanthogenys* procured by Wallace in the Aru Islands is in the British Museum; there are also two males and a female collected by Mr. W. Goodfellow at Silbattabatta, in the same group of islands. I can see no reason for regarding this form as a subspecies of the Australian *M. flaviventer* Gould, which is distinguished at a glance from the several New Guinea species by its black ear-coverts and olive-green back in the adult stage. This is an instance of

the present misuse of the term "subspecies." Here we have two perfectly different and easily recognised species representing two distinct types of the same genus, and I consider it most misleading to place the present species as a subspecies of *M. flaviventer*.

Besides *M. xanthogenys*, which inhabits the Aru Islands, and ranges from Southern Dutch New Guinea to South-east New Guinea, there are also found the following closely allied forms :—

1. *M. albifrons* Gray (type in the British Museum), occurring in Waigiu, Misol, and North-west New Guinea.

2. *M. albifrons novus* Roths. & Hartert, inhabiting Northern British New Guinea, from the Kumusi River and Collingwood Bay.

Machærorhynchus nigripectus harterti.

Machærorhynchus nigripectus Schleg.; Sharpe, Cat. iv. p. 392 (1879).

Machærorhynchus nigripectus harterti, van Oort, Notes, xxx. p. 235 (1909).

Machærorhynchus nigripectus saturatus, Roths. & Hartert, N. Z. xx. p. 498 (1913).

a. ♂ imm. Camp 6 A, Utaqua River, 2900 ft., 6th Jan. 1913. [C. B. K.]

b, c. ♂ ♀. Camp 6 c, Utaqua River, 5500 ft., 20th & 21st Feb. 1913. [C. B. K.]

d. ♂. Camp 11, Utaqua River, 7000 ft., 3rd Feb. 1913. [C. B. K.]

As pointed out by Dr. van Oort, the eastern race of this species from the Owen Stanley Range is distinguishable from the typical Arfak form by its somewhat larger size and by the darker colour of the upperparts in the female.

Subsequently Messrs. Rothschild and Hartert distinguished the birds from Mount Goliath under the name *M. n. saturatus*, the females being said to have still darker upperparts; but I do not think they are really separable from *M. n. harterti*, as a female specimen from Dorawaida typical of the latter is indistinguishable from the female (c)

obtained on the Utakwa River, which should be typical *M. n. saturatus*.

Specimen "a," an immature male, has no black patch on the chest and in other respects resembles the female.

****Myiagra rubecula*.**

Myiagra rubecula (Lath.) ; van Oort, p. 86 (1909).

A specimen, the sex of which was not ascertained, was procured at Merauke, and referred to this species by Dr. van Oort. It seems possible that it really belongs to my *M. l. mimikæ*, in which the sexes are alike in plumage.

In *M. rubecula* (= *M. plumbea* Vigors & Horsf.) the male is greyish-blue on the throat and back, quite different from the female.

***Myiagra latirostris mimikæ*.**

Myiagra latirostris Gould ; Sharpe, Cat. iv. p. 381 (1879) [part., Aru] ; Roths. & Hartert, N. Z. x. p. 466 (1903).

Myiagra mimikæ Ogilvie-Grant, Bull. B. O. C. xxix. p. 26 (1911).

a, b. ♂ ♀. Mouth of the Mimika River, 21st & 22nd March, 1911. [Nos. 1217, 1229, *C. H. B. G.*] (*Types of the subspecies.*)

c-n. ♂ ♀ et ♂ imm. Mouth of the Mimika River, 29th Nov.-16th Dec. 1910 ; 22nd & 24th March, 1911. [Nos. 9, 18, 60, 88, 105, 132, 144, 152, 1227, 1269, 1270, *C. H. B. G.*]

Adult male. Nearly allied to *M. latirostris* Gould, from Port Essington, but larger, and with the throat and breast of a rather darker rust-red (not paler as stated in the original description). Iris brown ; upper mandible black ; lower mandible light slate-colour ; feet black.

Total length 153 mm. ; wing 74-76 (as compared with 70-71 in *M. latirostris*) ; tail 72-75 ; tarsus 19.

Adult female. Similar to the male, but with scarcely any metallic sheen on the grey mantle, and with the throat much paler, and of a pale rust-colour.

Birds from the Aru Islands seem to be identical with
SER. X.—JUB.-SUPPL. 2.

those from the Mimika, and have a similar wing-measurement, 72-76.5 mm.

All the adult birds killed in November and December are in moult.

Young birds are easily recognised by having the greater secondary coverts tipped with whitish-buff, and the inner quills narrowly margined with the same light colour.

"The Mimika Flycatcher was only seen in the mangrove-swamps on the coast, where it was tolerably common. It had much the appearance and habits of the Common Flycatcher."—*C. H. B. G.*

**Myiagra* sp. ind. an *M. nitida* Gould ? ; van Oort, p. 86 (1909).

A female of this undetermined species was procured on the Noord River.

Rhipidura brachyrhyncha.

Rhipidura brachyrhyncha Schleg. ; Sharpe, Cat. iv. p. 316 (1879) [female].

Rhipidura atra Salvad. ; Sharpe, Cat. iv. p. 323 (1879) [male] ; Roths. & Hartert, N. Z. x. p. 465 (1903), xx. p. 495 (1913).

Rhipidura meyeri Büttikofer, Notes Leyden Mus. xv. pp. 81, 82, 113 (1893).

a, b. ♀ et ♀ imm. Iwaka River, 3rd & 6th Feb. 1911. [Nos. 984, 1004, *C. H. B. G.*]

c. ♂ vix ad. Camp 3, Utakwa River, 2500 ft., 4th Dec. 1912. [*C. B. K.*]

d-h. ♂ ♀. Camp 6 A, Utakwa River, 2900 ft., 6th-18th Jan. 1913. [*C. B. K.*]

i. ♀. Camp 6 c, Utakwa River, 5500 ft., 25th Feb. 1913. [*C. B. K.*]

Female. Iris brown ; upper mandible sooty, lower pale horn-colour ; feet ash-colour.

Immature female. As above, but with the tip of the lower mandible dusky.

Both Sharpe in the Catalogue and Count Salvadori (O. P. ii. p. 72) have, in my opinion, correctly identified *R. atra*

Salvad. as the male of *R. brachyrhyncha* Schleg. Since that date, however, considerable confusion has been caused by more recent authors. In South-east New Guinea the present species is represented by *R. b. cinnamomea* Meyer [Zeit. ges. Orn. iii. p. 17, pl. iii. fig. 3 (1886)], which was founded on a female. Messrs. Rothschild and Hartert (N. Z. x. p. 465) are unable to distinguish two races of cinnamon females, and consider those from Dutch New Guinea similar to those from the British Colony; but I agree with Dr. Büttikofer (*op. cit.* p. 113) that the females can be distinguished, and find that the males also differ somewhat, as the following comparative table will show. Dr. Büttikofer, in failing to recognise the rufous birds as females of the black forms, has greatly involved matters.

<i>R. brachyrhyncha</i> Schleg. (<i>R. atra</i> Salvad.).	<i>R. b. cinnamomea</i> Meyer.
♂. Black, with white under wing-coverts and white tips to the axillaries.	♂. Black, with the under wing-coverts and axillaries black mixed with white.
(<i>R. brachyrhyncha</i> Schleg. & <i>R. meyeri</i> Büttik.)	
♀. Back chestnut, crown with a brownish tinge.	♀. Back paler chestnut, almost the same colour as the crown.

***Rhipidura rufidorsa*.**

Rhipidura rufidorsa Meyer; Sharpe, Cat. iv. p. 322 (1879); Roths. & Hartert, N. Z. xx. p. 495 (1913).

a-h. ♂ ♀. Parimàu, Mimika River, 27th Aug.-25th Dec. 1910. [Nos. 28, 71, 111, 229, 480, 673, 820, *C. H. B. G.*; & 1500, *G. C. S.*]

i, k. ♂ ♀. White Water Camp, Kaparé River, 2nd-8th Nov. 1910. [Nos. 420, 463, *C. H. B. G.*]

l. ♂. Tuaba River, 1st Nov. 1910. [No. 1469, *G. C. S.*]

m. ♂ imm. Launch Camp, Setakwa River, 8th Nov. 1912. [*C. B. K.*]

Iris brown; bill horn-brown; lower mandible lighter; feet pale ashy-brown, purplish-brown, or slate-brown.

Total length in the flesh 152 mm. (= 6 inches).

The type of this species was obtained in Jobi, and there is a typical example from that island collected by Meyer in the British Museum. With this specimen our birds seem to be identical. Up to the present time this was the only example in the collection, and the sex “♂” appears to have been wrongly determined, for the males are very appreciably larger than the females, as is shown by the following measurements:—

8 males: wing 63·5–68 mm.; 3 females: wing 57–62 mm.

“The Chestnut-backed Flycatcher was nowhere a common species, and was usually observed singly. Like *Todopsis bonapartii*, it has a pretty habit of raising the tail and depressing the wings, and at the same time running up and down some horizontal branch; this habit was shared by most of the other species of *Rhipidura* met with.”—*C. H. B. G.*

***Rhipidura streptophora*.**

Rhipidura streptophora Ogilvie-Grant, Bull. B. O. C. xxix. p. 25 (1911).

a, b. ♂ ♀. Mouth of the Mimika River, 18th & 24th March, 1911. [Nos. 1187, 1263, *C. H. B. G.*] (*Types of the species.*)

c-f. ♂ et ♂ imm. Mouth of the Mimika River, 8th & 12th Dec. 1910 and 21st March, 1911. [Nos. 56, 57, 126, 1222, *C. H. B. G.*]

This species is nearest to *R. dryas* Gould, the type of which came from Port Essington, and is in the British Museum. Like the Australian form, it has very little chestnut on the tail-feathers, and that is confined to the extreme basal portion, while the under tail-coverts are pale rufous-buff. It is, however, a much larger bird, the chestnut extends further over the crown, and the patch of black white-edged feathers on the fore-neck below the black band is much more extensive. The iris, bill, and legs are brown.

Total length 165 mm. (=6·5 inches); wing 75–77; tail 91.

In *R. dryas* the wing measures 66–68 mm.

"This new form of Flycatcher was only observed in the mangrove-swamps along the coast, where it was not common. Its habits and actions are similar to those of *R. rufidorsa*."—*C. H. B. G.*

The group of *Rhipidura* to which this species belongs is widely distributed, and includes a number of closely allied forms such as :

R. rubrofrontata Ramsay. Lango, Guadalcanar, Solomon Islands. (Type in the British Museum.)

To *R. rubrofrontata* Ramsay, Messrs. Rothschild and Hartert have referred allied birds from Rendova and Gizo, also in the Solomon Group. The British Museum possesses male examples from both these islands, and, as noted above, the type-specimen of *R. rubrofrontata* from Guadalcanar, as well as several typical examples procured by Mr. C. M. Woodford at Aola, on the same island. The Rendova and Gizo birds differ markedly from the typical *R. rubrofrontata* in having the basal half of the tail-feathers chestnut and the ear-coverts black. In *R. rubrofrontata* the chestnut at the base of the tail-feathers is much more restricted and the ear-coverts are brown like the crown. I propose to name the Rendova bird

***Rhipidura harterti*, sp. n.**

For the moment I prefer to give it full specific rank.

***Rhipidura threnothorax*.**

Rhipidura threnothorax Müll.; Sharpe, Cat. iv. p. 325 (1879); van Oort, p. 85 (1909); Roths. & Hartert, N. Z. xx. p. 494 (1913).

a-d. ♂. Upper Mimika River, 2nd Feb.—30th April, 1910. [Nos. 1017, 1054, 1110, 1141, *G. C. S.*]

e-k. ♂ ♀ et ♂ imm. Parimau, Mimika River, 4th Sept.—29th Dec. 1910. [Nos. 121, 122, 239, 780, 868, *C. H. B. G.*; 1512, *G. C. S.*]

l, m. ♂. White Water Camp, Kaparé River, 3rd & 5th Nov. 1910. [Nos. 431, 435, *C. H. B. G.*]

n. ♂. Wataikwa River, 21st Oct. 1910. [No. 1419, *G. C. S.*]

o-r. ♂ ♀. Canoe Camp, Setakwa River, 31st Oct. 1912-3rd Jan. 1913. [*C. B. K.*]

Iris hazel; upper mandible black, lower light brown; feet sooty-black or dark ash-colour.

Out of a series of seventeen specimens only three are females; these have the chest black, spotted with white and the breast and belly dark grey, some of the feathers of the upper breast having white streaks.

Six of the males resemble the females, but the black- and white-spotted feathers of the breast occupy a larger area and the light markings are larger. Six other males, which appear to be the most adult in the series, have the underparts blacker, the darkest having the entire breast, belly, and under tail-coverts black, while, both in this bird and in another very dark male, the white chest-spots are much reduced in size, being as small or smaller than those of the female. This proves the reverse of the conclusion arrived at by Sharpe (*Catalogue*, p. 325). Two quite young males (Nos. 121 & 868) have the underparts, including the chest, brownish-grey, the latter being scantily spotted with white.

It would thus appear that the adult male differs very considerably from the adult female, being an altogether blacker bird.

The type of this species was procured at Lobo near Triton Bay, about 200 miles west of the Mimiķa River,

Rhipidura fumosa Schleg. is considered to be the young of this species by Sharpe, but I think this must be a mistake, for he describes the type as having the underparts "dusky chocolate."

"The Black-tailed Pearl-breasted Flycatcher was a common species everywhere except near Wakatimi and on the coast. Its habits are exactly like those of *R. leuco-thorax*."—*C. H. B. G.*

Rhipidura maculipectus.

Rhipidura maculipectus Gray ; Sharpe, Cat. iv. p. 326 (1879) ; Roths. & Hartert, N. Z. x. p. 463 (1903).

a, b. Mouth of the Mimika River, 18th & 25th March, 1911. [Nos. 189, 1281, *C. H. B. G.*]

The type-specimen, obtained by Wallace in the Aru Islands, is in the British Museum. The Mimika specimens differ slightly from most of the typical examples from Aru in having the chin more conspicuously white and the pearled spots on the chest larger, but, as in *R. threnothorax*, this character is liable to vary individually. From the latter species it may be at once recognised by the white tips to the tail-feathers.

In the male the wing measures 81 mm. (= 3·2 inches) and in the female 77 mm. (3·05 inches).

In typical examples from the Aru Islands the wing measures :—

Males 78–82 mm. (= 3·1–3·25 inches) ; females 71 mm. (= 2·8 inches).

Rhipidura leucothorax.

Rhipidura leucothorax Salvad. ; Sharpe, Cat. iv. p. 327 (1879) ; Roths. & Hartert, N. Z. xx. p. 494 (1913).

a-e. ♂ ♀. Wakatimi, Mimika River, 22nd Aug. 1910 to 12th March, 1911. [Nos. 7, 8, 1069, 1135, 1145, *C. H. B. G.*]

f, g. ♂. Upper Mimika River, 6th Feb. & May 1910. [No. 1037, *G. C. S. & W. G.*]

h-o. ♂ ♀ et ♂ imm. Wataikwa River, 19th Sept.–14th Oct. 1910. [Nos. 1193, 1234, 1320, 1345, 1346, 1365, 1366, *G. C. S.*]

p-x. ♂ ♀ et ♀ imm. Launch Camp, Setakwa River, 3rd–25th Oct. 1912. [*A. F. R. W. & C. B. K.*]

y, z. ♂ et ♂ imm. Canoe Camp, Setakwa River, 27th Oct. & 21st Dec. 1912. [*C. B. K.*]

Iris dark brown ; upper mandible black, lower pale horn-colour ; feet dusky black or dark ash-colour.

There is no difference between the plumage of the sexes. Young birds of the year resemble the adult, but the lower mandible is blackish like the upper mandible, whereas in the adult it is entirely whitish. The white spots at the tips of the greater wing-coverts are usually smaller in young birds, but this is a somewhat variable character.

Several examples in the above series are in moult between the months of September and February.

A nest obtained at Wakatimi on the 22nd of August, 1910, contained two fresh eggs. It is cup-shaped, and composed of dried rushes, etc., lined with fine rootlets and plastered over outside with cobwebs; below the actual nest the material is extended downwards, the whole structure having a long inverted cone-shaped appearance. It was placed in the fork of a weed which was growing in rather deep water in the swamp, the nest being only about eighteen inches above the surface.

The eggs, two in number, are of a rather short oval shape, somewhat pointed towards the smaller end, and slightly glossy. The ground-colour is pale creamy white, with various blurred markings of pale umber-brown and lilac-grey spots, mostly welded into a zone round the widest part of the shell. They measure respectively 19×14 , 18×14.5 mm.

"This was a common Flycatcher, and was usually observed in the reeds and undergrowth by the creeks and rivers. It has all the habits and actions of its allies as described under *R. rufidorsa*."—*C. H. B. G.*

***Rhipidura setosa gularis*.**

Rhipidura setosa (Quoy & Gaim.); Sharpe, Cat. iv. p. 329 (1879) [part.].

Rhipidura setosa gularis Müller; Roths. & Hartert, N. Z. x. p. 464 (1903), xx. p. 494 (1913).

a-e, ♂ ♀. Mouth of the Mimika River, 30th Nov. 1910–24th March, 1911. [Nos. 22, 82, 153, 1266, 1274, *C. H. B. G.*]

f. ♂. Wataikwa River, 25th Oct, 1910. [No. 1430, *G. C. S.*]

g. ♂. Launch Camp, Setakwa River, 23rd Oct. 1912.
[*A. F. R. W.*]

h, i. ♂. Canoe Camp, Setakwa River, 19th & 20th Nov. 1912. [*C. B. K.*]

Iris brown; bill black; feet black, brownish-black, or purplish-brown.

The types of this somewhat widely spread species came from the Lobo District above Triton Bay, the Utanata River, and Princess Marianne Strait, so that the above series may be regarded as typical examples. The true *R. setosa* was described from New Ireland, and is also found on New Britain and the Duke of York Group; it is distinguished by having conspicuous white margins to the inner secondary quills and tertiaries.

Some specimens have distinct narrow white shaft-streaks to the grey feathers of the chest, showing an approach towards *R. büttikoferi* Sharpe, from Damma, Roma, Letti, and Moa Islands in the Banda Sea; the latter species is, however, quite distinct, having pale buff axillaries and under wing-coverts (instead of grey), the chest strongly streaked with white, and the bill much longer and stouter. These differences are not mentioned in Sharpe's original description [*cf.* Bull. B. O. C. i. p. xviii (1892)], and are therefore worthy of note.

"The White-throated Flycatcher was only observed near the coast, where it frequented the mangrove-swamps. Its habits are similar to those of its allies."—*C. H. B. G.*

Rhipidura hyperythra.

Rhipidura hyperythra Gray; Sharpe, Cat. iv. p. 338 (1876); van Oort, p. 85 (1909).

Rhipidura hyperythra mülleri Meyer; Roths. & Hartert, N. Z. xx. p. 495 (1913).

a, b. ♂. Iwaka River, 23rd Jan. & 11th Feb. 1911.
[Nos. 905, 1024, *C. H. B. G.*]

c-f. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 22nd Nov. 1912–11th Jan. 1913. [*C. B. K.*]

Iris dark brown ; upper mandible dark brown, lower mandible yellow ; feet horn-brown.

The type of this species, procured by Wallace in the Aru Islands, is in the British Museum. The series listed above agrees well with the Aru bird, the white tips to the outer tail-feathers being shorter, about 9 to 12 mm. wide, but the wing-measurement is a trifle longer.

	Wing.
1 ♂ (type). Aru Islands.....	70 mm.
7 ♂. Dutch New Guinea	74-80 mm.

I have only one specimen (the type) from the Aru Islands for comparison, but if the difference in size is considered worthy of subspecific value, which I do not consider it to be, the Dutch New Guinea bird must stand as *R. h. mülleri* Meyer, type from Lobo District, above Triton Bay.

Messrs. Rothschild and Hartert have recognised at least three races of *R. hyperythra*, and have pointed out that examples from British New Guinea have the white tips to the outer tail-feathers rather wider, about 15-16 mm. wide ; but this is a very variable character, and too much reliance should not be placed on it or on the amount of white on the chin, another character which they have put forward.

***Rhipidura albolimbata*.**

Rhipidura albolimbata Salvad. ; Sharpe, Cat. iv. p. 315 (1879).

Rhipidura auricularis Roths. & Hartert (nec De Vis), N. Z. xx. p. 494 (1913).

Rhipidura albolimbata lorentzi van Oort, p. 85 (1909).

a, b [? ♀ et ♀ imm.]. Camp 6 B, Utakwa River, 4200 ft., 25th & 26th Jan. 1913. [C. B. K.]

c. ♂ imm. Camp 9, Utakwa River, 5500 ft., 3rd Feb. 1913. [C. B. K.]

d. ♂ imm. Camp 11, Utakwa River, 8000 ft., 6th Feb. 1913. [C. B. K.]

These specimens appear to be typical *R. albolimbata* Salvad. The species is distinguished from *R. a. auricularis* De Vis [Brit. New Guinea Rep. Sept. 1888 to June 1889,

App. G, p. 108 (1890), and 'Ibis,' 1891, p. 30], from the Musgrave Range, 7000-9000 ft., and the mountains of South-eastern New Guinea, by having the back and upper-parts greyish-black, almost uniform in colour with the crown; in the latter form these parts are dark grey and in marked contrast with the blackish crown. The grey on the sides of the breast and belly is also a little darker in the present species than in *R. a. auricularis*.

R. concinna De Vis [Ann. Rep. New Guinea, July 1890 to June 1891, App. CC, p. 94 (1892)] from Mt. Suckling appears to be synonymous with *R. a. auricularis*.

R. a. lorentzi van Oort from the Hellwig Mountains is no doubt synonymous with the true *R. albolimbata*, the male of which appears to be distinctly larger than the female.

Two males: wing 80.5 and 81 mm.; tail 77 and 83 mm.

Two females(?): wing 70 and 72.5 mm.; tail 70 and 72 mm.

Younger birds are easily recognised by having scarcely any whitish-buff on the middle of the breast, the feathers of the rump tipped with chestnut, and the secondary quills tipped with pale rufous buff.

The species is new to the British Museum.

Rhipidura tricolor.

Rhipidura tricolor (Vieill.); Sharpe, Cat. iv. p. 339 (1879); van Oort, p. 85 (1909); Roths. & Hartert, N. Z. xx. p. 494 (1913).

a-d. ♂ ♀. Mouth of the Mimika River, 8th & 9th Dec. 1910 and 24th March, 1911. [Nos. 69, 87, 1264, 1292, *C.H.B.G.*]

e. ♀. Wakatimi, Mimika River, 23rd Aug. 1910. [No. 18, *C.H.B.G.*]

f. ♂. White Water Camp, Kaparé River, 9th Nov. 1910. [No. 466, *C.H.B.G.*]

g-l. ♂ ♀. Wataikwa River, Aug.-11th Oct. 1910. [Nos. 1199, 1274, 1350, *G.C.S.*]

m, n. ♂ ♀. Launch Camp, Setakwa River, 13th Oct. 1912 & 10th March, 1913. [*C.B.K.*]

o-r. ♂ ♀. Canoe Camp, Setakwa River, 31st Oct.-31st Dec. 1912. [*C.B.K.*]

Iris dark brown ; bill and feet black.

In five adult males the wing measures from 102–104 mm.
(=4·0–4·1 inches).

In six adult females the wing measures from 96–99 mm.
(=3·75–3·9 inches).

Immature birds have some sandy feathers round the nape, and the greater and median wing-coverts are tipped with rufous.

This widely spread species has been separated into a number of subspecies by recent authors. The type of *R. tricolor* (Vieill.) was said to have been procured in the island of Timor, but as the species has not since been met with there, Mr. Stresemann has substituted Sydney, New South Wales, as the type-locality. As the differences characterising the various forms which have been recognised are entirely a matter of size, I have re-measured all the specimens in the British Museum, and give below the condensed results. It should be remembered that the male is always larger than the female, and that in many instances the sex of the specimens has not been ascertained.

<i>No. of specimens.</i>	<i>Locality.</i>	<i>Wing in mm.</i>	
2	Morti I.	104, 106.	
1	Gilolo.	105.	
2	Ternate.	108, 108.	
3	Batchian.	102–106.	
1	Waigiu.	104.	
2	Salawatti.	100 (imm.), 104.	
1	Misol.	108.	
5	Buru.	100–106.	
2	Amboina.	102, 110.	
4	Ceram.	103–105.	
4	Aru Islands.	94–102.	Type-locality of <i>R. atripennis</i> G. R. Gray.
17	Dutch New Guinea (as listed above).	♂ 102–104 ; ♀ 96–99.	
1	Port Moresby.	94.	
2	New Britain.	♀ 100, 100.	
2	Duke of York Is.	♂ 106, 97.	

No. of specimens.	Locality.	Wing in mm.	
2	New Ireland.	100.	Type-locality of <i>R. melaleuca</i> (Q. & G.).
3	Solomon Islands.	99, ♂ 110.	
2	Cape York.	91, 98.	Type-locality of <i>R. t. utingu</i> Mathews.
7	Queensland.	93-99.	
2	Port Curtis.	92, 98.	
2	New South Wales.	93, 102.	Type-locality of <i>R. motacilloides</i> Vig. & Horsf.
2	Richmond River.	95, 96.	
7	Port Essington.	85-92.	Type-locality of <i>R. picata</i> Gould.
2	Victoria R., N. Territory.	88, 90.	
4	West Australia.	♂ 102-104; ♀ 98.	
2	South-west Australia.	♂ 101; ♀ 96.	

"The Black-and-White Fan-tailed Flycatcher was rather common everywhere, and had more the appearance than the habits of a Flycatcher.

"At Wakatimi when I first arrived I found the nest of this species placed on an exposed branch of a tree overhanging the river; it was a small cup-shaped structure plastered on the outside with cobwebs. It contained two eggs which were unfortunately broken when trying to remove them.

"The female (No. 18) shot on the 23rd of August was the sitting-bird. While coming down to Wakatimi for the last time in March 1911 I observed another nest, on which the bird was sitting, placed on a branch of a submerged dead tree in the open river. The nest appeared to be in every way similar to the first."—*C. H. B. G.*

***Todopsis wallacii*.**

Todopsis wallacii Gray; Sharpe, Cat. iv. p. 283 (1879); Roths. & Hartert, N. Z. xx. p. 499 (1913).

Todopsis coronata Gould; Sharpe, Cat. iv. p. 284 (1879).

a-c. ♂ ♀. Wakatimi, Mimika River, 28th Dec. 1910, 28th Feb. & 6th March, 1911. [Nos. 186, 1048, 1102, *C. H. B. G.*]

d-g. ♂ ♀. Parimàu, Mimika River, 17th Nov., 3rd & 9th Dec. 1910. [Nos. 574, 639, 691, 692, *C. H. B. G.*]

h-m. ♂ ♀ et ♀ imm. White Water Camp, Kaparé River, 12th Oct.-2nd Nov. 1910. [Nos. 304, 305, 351, 365, 422, *C. H. B. G.*]

n, o. ♂. Launch Camp, 17th & 21st Oct. 1912. [*C. B. K.*]

p-s. ♂ ♀. Canoe Camp, Setakwa River, 17th & 18th Oct. 1912. [*C. B. K.*]

t, u. ♀ et ♀ imm. Camp 3, Utakwa River, 2500 ft., 26th Dec. 1912. [*C. B. K.*]

Iris hazel or brown; bill olive-brown or black, tip flesh-colour; feet pale olive-brown.

Male examples are distinguished by the silvery-white colour of the underparts, and perhaps by the somewhat longer bill. In the female the underparts are washed with pale buff, especially on the flanks.

Young birds resemble the adult, but the bill is rather shorter and of a brownish horn-colour instead of black, but the difference appears to be very slight.

Some birds are moulting slightly in October, December, February, and March. I can see no difference between typical examples of *T. wallacii* from Misol and birds from New Guinea and the Aru Islands. The latter have been separated as *T. coronata* Gould, but the series now available for comparison clearly shows that the differences which have been pointed out as distinctive characters are purely individual. Birds with lanceolate blue tips to the feathers of the crown and paler blue shafts, characters supposed to be peculiar to Misol specimens, are found equally amongst birds from the Aru Islands and New Guinea.

“Wallace’s Todopsis was first met with on the slopes of the Saddle Peak range near the Pygmy village of Wamberimi, and was believed to be confined to the hills; but we afterwards found it was by no means uncommon both at Parimàu and around Wakatimi. It was always observed in pairs, and frequented the undergrowth. It has a short, sharp call-note.”—*C. H. B. G.*

Todopsis bonapartii.

Todopsis bonapartii Gray ; Sharpe, Cat. iv. p. 281 (1879).

Todopsis cyanocephalus bonapartii van Oort, p. 84 (1909) ; Roths. & Hartert, N. Z. xx. p. 499 (1913).

? *Todopsis cyanocephalus dohertyi* Roths. & Hartert, N. Z. x. p. 477 (1903).

a. ♀. Mouth of the Mimika River, 8th Dec. 1910. [No. 79, *C. H. B. G.*]

b-l. ♂ ♀ et ♀ imm. Wakatimi, Mimika River, 28th Dec. 1910-9th March, 1911. [Nos. 188, 1093, 1094, 1096, 1099, 1118, 1119, 1131, *C. H. B. G.* ; 1530, 1543, *G. C. S.*]

m-x. ♂ ♀ et ♂ imm. Launch Camp, Setakwa River, 4th Oct.-8th Nov. 1912. [*C. B. K.*]

Iris dark brown ; bill black ; feet and toes sooty-brown.

Total length in the flesh 159 mm. (= 6¼ inches).

All the birds in our series belong to this form and not to *T. cyanocephala*, which was described by Quoy & Gaimard from Dorei and was figured in the P. Z. S. 1858, pl. cxxxiv. The latter species has the blue on the crown rich cobalt and the mantle light blue, almost verditer-blue, while in *T. bonapartii* both crown and mantle are purplish-blue.

The female differs from the female of *T. cyanocephala* in having the crown paler and less purplish-blue, but there does not seem to be any other distinction. The female of *T. cyanocephala* is well figured by Quoy & Gaimard [Voy. de l'Astrolabe, pl. v. fig. 4 (1833)].

The type of *T. bonapartii*, procured by Wallace in the Aru Islands, is preserved in the British Museum ; there are also typical examples of *T. cyanocephala* from Dorei from the same source. I should certainly have expected our specimens to belong to the northern form and not to *T. bonapartii*, which is known to extend as far east as British New Guinea, but it must be noted that its distribution is purely coastal. Messrs. Rothschild and Hartert have recognised another form (*T. c. dohertyi*) from Takar, on the northern coast of Dutch New Guinea, based on the female, which is said to

have a darker back than the female of *T. cyanocephala*, but it is almost certainly identical with that species.

Two young birds, a male from Launch Camp, Setakwa River, and a female (No. 1119) from Wakatimi, are moulting into the adult plumage. In the young female the throat is at first white like the chest, the crown black, and the rest of the plumage much like that of the adult female.

"This striking species, known as Bonaparte's Todopsis, was only noticed on the lower reaches of the river near Wakatimi, where it usually frequented the denser vegetation bordering the creek and river-banks. It has a pretty habit of raising and spreading the tail so that it forms a fan, and at the same time lowering its wings and uttering a short twittering note. Both sexes act in this manner."—*C. H. B. G.*

****Clytomyias insignis oorti*.**

Clytomyias insignis oorti Roths. & Hartert; iid. N. Z. xx. p. 499 (1913).

A female example from Mt. Goliath has been referred to this form.

***Heteromyias armiti*.**

Heteromyias armiti (De Vis) ; Sharpe, Bull. B. O. C. xi. p. 60 (1901) ; Roths. & Hartert, N. Z. x. p. 467, pl. xiii. fig. 3 (1903), xx. p. 497 (1913).

a. ♀. Camp 6 c, Utakwa River, 5500 ft., 25th Feb. 1913. [*C. B. K.*]

In this specimen there is no visible wing-speculum, the innermost primary only showing a little white at the base of the outer web. In most examples of *H. armiti* the white speculum commences on the outer web of the third primary quill, and is continued inwards. In the present specimen, and in a series of birds from Mt. Goliath in the Tring Museum, the chest is distinctly grey, more so than in any example of typical *H. armiti*, but this slight difference is not quite constant.

Tregellasia papuana.

Pæcilodryas papuana Meyer; Sharpe, Cat. iv. p. 247, pl. viii. fig. 1 (1879); van Oort, p. 84 (1909).

Microœca papuana Roths. & Hartert, N. Z. xx. p. 496 (1913).

a, b. ♂. Camp 6 B, Utaḡwa River, 4200 ft., 26th & 28th Jan. 1913. [C. B. K.]

c. ♀. Camp 6 c, Utaḡwa River, 5500 ft., 17th Feb. 1913. [C. B. K.]

Microœca papuana Meyer does not seem to be referable to that genus, for it differs in many ways from the typical species *M. assimilis*, which, though its small tarsi and feet are much the same, has the first primary very short and the second very long, about four times as long as the first quill. *M. papuana* is equally out of place in the genus *Pæcilodryas*, where it has generally been placed. The type of that genus, *P. cerviniventris*, has large strong feet and tarsi, and the relative proportions of the wings and tail are very different, the wings being very little longer than the tail. In *M. papuana* the wings are proportionately very much longer and extend nearly to the end of the tail. Mr. Mathews has proposed the name *Tregellasia* for *Eopsaltria capito* Gould (\equiv *Pæcilodryas capito* of Sharpe, Cat. iv. p. 245). *M. papuana* is obviously congeneric with *E. capito*, and should also be included in the genus *Tregellasia*, together with various allied yellow forms.

Tregellasia leucops nigro-orbitalis.

Pæcilodryas leucops nigro-orbitalis Roths. & Hartert, N. Z. xx. p. 497 (1913).

a-d. ♂ ♀ et ♀ imm. Iwaka River, 6th-9th Feb. 1911. [Nos. 998, 1006, 1006 a, 1006 b, C. H. B. G.]

e. ♂. Camp 3, Setakwa River, 26th Dec. 1912. [C. B. K.]

Iris umber-brown in male, raw sienna in female; bill black, base fleshy, gape yellow; feet pale delicate yellow.

This recently described form, which is new to the British Museum, differs from the typical *P. leucops* Salvad., from

the Arfak Mountains (*cf.* Sharpe, Cat. iv. pl. viii. fig. 2), in lacking the black band from the eye to the gape, which in the typical race encloses the white loreal spot.

The young female from Iwaka still retains most of the first plumage quills in the wings; they differ from those of the adult in being margined with pale rufous.

"This Yellow Flycatcher was apparently a hill-species only, and was by no means plentiful. It was a very tame little bird, and the specimens shot were seen sitting on some conspicuous branch."—*C. H. B. G.*

Pæcilodryas pulverulenta.

Myiolestes pulverulentus Bonap. Consp. Av. i. p. 358 (1850) (ex S. Müller, MS. Mus. Lugd.).

Pæcilodryas pulverulenta Salvad. O. P. ii. p. 88 (1881).

a-h. Mouth of the Mimika River, 9th & 20th Dec. 1910 and 21st–23rd March, 1911. [Nos. 90, 162, 1218, 1223, 1230, 1232, 1233, 1248, *C. H. B. G.*]

Iris brown; bill and feet black.

Müller's type-locality for this species is the Utanata River, which is only a few miles west of the Mimika. Our series may, therefore, be regarded as typical examples of *P. pulverulenta*, which is new to the British Museum.

The wing-measurements vary considerably in individuals.

6 ♂. Wing 80, 85, 85, 87, 87, 91 mm.

2 ♀. Wing 87, 89 mm.

"This was quite a common Flycatcher in the mangrove-swamps, the only place where it was observed. It appeared to spend much of its time on the ground."—*C. H. B. G.*

In the British Museum collection there are two examples of a *Pæcilodryas* which appear to be undescribed; they were collected by Mr. J. M. Dumas in Northern New Guinea. Mr. Dumas was a companion of Alfred H. Everett during his travels in the Moluccan Islands, and after his death procured some interesting species. I propose to name this new Flycatcher:—

***Pœcilodryas brachyura dumasi*, subsp. n.**

Most nearly allied to *P. brachyura* (Sel.), but the colour of the upperparts, including the crown, is dead black, instead of dark grey, the white superciliary stripe does not extend quite to the base of the upper mandible, and there is a well-marked black spot on the chin which is apparently not always present in *P. brachyura*; the belly and under tail-coverts are white. In the figure of the type-specimen of *P. brachyura* from Hatam, Arfak Mts. (Andai according to Dr. Hartert; cf. P. Z. S. 1873, p. 691, pl. liii.), the basal part of the belly and the under tail-coverts are coloured pale rusty-red or pale fawn-colour, but in the description there is no mention of this colour, the whole of the underparts being white ("*subtus omnino albus*"), as in the specimens before me. Several of the birds have the middle of the breast, etc., slightly discoloured, but there can be no doubt that they have become soiled during the process of skinning.

Allied forms are *P. hypoleuca* (Gray) and *P. hermani* Madarasz, from the Finisterre Range, but the former and apparently the latter are distinguished by having a black band on each side of the chest almost uniting with one another in the middle line.

Wing 79 mm.; tail 48; tarsus 19.5.

In the dried skin the bill is black and the feet and toes are yellow.

Hab. Northern New Guinea.

Type in the British Museum. Adult, North New Guinea. Coll. J. M. Dumas.

There are two perfectly similar specimens in the Tring Museum also procured by J. M. Dumas in Northern New Guinea.

***Pœcilodryas hypoleuca*.**

Pœcilodryas hypoleuca Gray; Sharpe, Cat. iv. p. 244 (1879); Salvad. O. P. ii. p. 86 (1881); van Oort, p. 84 (1909); Roths. & Hartert, N. Z. xx. p. 496 (1913).

a-c. ♂ ♀. Wakatimi, Mimika River, 1st & 5th March, 1911. [Nos. 1056, 1057, 1098, *C. H. B. G.*]

d-i. ♂ ♀. Parimàu, Mimika River, 27th Aug.-19th Dec. 1910. [Nos. 24, 156, 157, 669, 769, 774, *C. H. B. G.*]

k, l. ♂ et ♀ imm. White Water Camp, Kaparé River, 25th Oct. & 3rd Nov. 1910. [Nos. 336 & 433, *C. H. B. G.*]

m-r. ♂ ♀. Launch Camp, Setakwa River, 3rd Oct.-29th Nov. 1912. [*C. B. K.*]

s. ♀ imm. Canoe Camp, Setakwa River, 22nd Nov. 1912. [*C. B. K.*]

Iris dark brown; bill dark brown; feet in the male bluish-ash or dark slate-colour, in the female pale violet.

Birds in moult are to be found among those killed in October, December, and March; there are others obtained during October and December in which the plumage of the upperparts is worn and brownish. The moult appears to be very irregular and may be observed in specimens killed between October and March.

"We did not find this Black-and-White Flycatcher a common species. It is usually to be seen in pairs, and frequents the lower trees and undergrowth."—*C. H. B. G.*

Pæcilodryas cyana.

Pæcilodryas cyana (Salvad.); id. O. P. ii. p. 89 (1881).

Pæcilodryas subcyanea De Vis, Ibis, 1897, p. 377.

Pæcilodryas cyanus subcyanea Roths. & Hartert, N. Z. x. p. 470 (1903), xx. p. 496 (1913).

a-c. ♂. Camp 6 B, Utakwa River, 4200 ft., 28th Jan. & 6th Feb. 1913. [*C. B. K.*]

d, e. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 27th Jan. 1913. [*C. B. K.*]

Iris brown; bill and feet black.

P. cyana was described from the Arfak Mountains; subsequently birds from South-east New Guinea were described as *P. subcyanea* by De Vis. Messrs. Rothschild and Hartert (*op. cit.*) have recognised both forms, but in this I cannot concur for none of the characters given by De Vis are constant or of any value. The measurements of our series are as follows:—

	Sex.	Wing. mm.
Arfak Mountains, L. Laglaize	♂	90
Utakwa River, C. B. Kloss	♂	90
" "	♂	87
" "	♂	85
" "	♀	78 (in moult)
" "	♂	82
Aroa River, A. S. Meek	♂	94
" "	♂ imm.	87
" "	♀	86 (with eggs)
" "	♀	84
" "	♀	82
Owen Stanley Mountains, W. Goodfellow.	♂	84
" " "	♀	87 5
" " "	♀	86
" " "	♀	85
" " "	♀	81
Moroka, Owen Stanley Mountains, { W. Goodfellow.	♂	92·5
S.E. New Guinea	♂	93

The male type of *P. cyana*, from Hatam, Arfak, has a wing of 85 mm. as recorded by Count Salvadori.

It will be seen from the measurements given above that eastern birds are not separable from Arfak specimens on account of their larger size.

**Pœcilodryas bimaculata*.

Pæcilodryas bimaculata Salvad.; Roths. & Hartert, N. Z.
xx. p. 497 (1913).

Specimens from the Utkwa River are referred to this species.

**Pœcilodryas albonotata griseiventris*.

Pæcilodryas (Megalestes) albonotata griseiventris Roths. & Hartert, N. Z. xx. p. 496 (1913).

This new subspecies was discovered by A. S. Meek on Mt. Goliath, 5000 ft.

***Monachella mülleriana*.**

Monachella mülleriana Schleg. ; Sharpe, Cat. iv. p. 240 (1879) ; van Oort, p. 84 (1909).

Monachella saxicolina Salvad. ; id. O. P. ii. p. 83 (1881).

a. ♂. Upper Mimika River, 21st Jan. 1910. [No. 1005, *G. C. S.*]

b. ♂. Parimau, Mimika River, 14th Dec. 1910. [No. 725, *C. H. B. G.*]

c-i. ♂ ♀ et ♂ juv. White Water Camp, Kaparé River, 17th Oct.-9th Nov. 1910. [Nos. 320, 328, 329, 353, 354, 355, 468, *C. H. B. G.*]

k. ♀ imm. Iwaka River, 1st Feb. 1911. [No. 972, *C. H. B. G.*]

l, m. ♂ ♀. Launch Camp, Setakwa River, 17th Oct. 1912. [*C. B. K.*]

n, o. ♂ ♀. Canoe Camp, Setakwa River, 4th & 5th Nov. 1912. [*C. B. K.*]

Adult male and female. Iris brown ; bill black ; feet sooty-brown.

Young male. Iris brown ; upper mandible black, lower lilac ; feet ashy.

Specimens killed in October and November are either in moult or have completed their change of plumage.

The young bird (No. 329) in first plumage has the crown of the head sooty-black, each feather with a triangular sandy-buff spot at the tip ; the back mottled with pale brownish-grey, the feathers tipped with pale sandy-buff ; the wing-coverts and quills black tipped with pale sandy ; the underparts white, the feathers of the chin and throat edged with brownish, giving these parts a somewhat barred appearance.

In an immature bird (No. 972), killed the following February, the pale buff tips of the feathers of the crown have nearly disappeared as also those on the wing-coverts and quills, except on the greater secondary coverts ; the back and throat are much the same as in the adult, grey and pure white.

"Müller's Flycatcher was only observed on the stony upper reaches of the rivers, where it was seen in parties of from four to eight individuals, either flitting up and down over the rushing water or sitting on the rocks and overhanging branches. It was one of the most attractive and delightful objects on those almost lifeless rivers. Its call-note is a pretty 'ziwit,' and its habits and actions were much the same as those of the Common Flycatcher."—*C. H. B. G.*

Pseudogerygone chrysogaster.

Pseudogerygone chrysogastra (Gray); Sharpe, Cat. iv. p. 226 (1879).

Gerygone chrysogaster Salvad. O. P. ii. p. 97 (1881); van Oort, p. 83 (1909); Roths. & Hartert, N. Z. xx. p. 497 (1913).

a, b. ♂. Wakatimi, Mimika River, 10th March & 28th Dec. 1911. [Nos. 185, 1136, *C. H. B. G.*]

c-i. ♂ ♀ et ♂ ♀ imm. Parimau, Mimika River, 17th Sept.-28th Dec. 1910. [Nos. 206, 207, 228, 672, 784, 853, *C. H. B. G.*; & 1489, *G. C. S.*]

k-q. ♂ ♀. Launch Camp, Setakwa River, 5th-31st Oct. 1912. [*C. B. K.*]

r-x. ♂ ♀ et ♀ imm. Canoe Camp, Setakwa River, 5th Nov.-23rd Dec. 1912. [*C. B. K.*]

The types of this species collected by Wallace in the Aru Islands are in the British Museum.

The iris is variously described as dark, red-brown, russet, crimson, and inner ring red, outer yellow; bill black; feet pale brown to purplish-fleshy.

Individuals from Parimau, Canoe Camp, and Launch Camp, killed in October, November, and December, are in moult; while some birds obtained during the same months are in worn plumage, and have not commenced to change; others, again, are in freshly-moulted plumage. It would thus appear that the time of moulting is very irregular.

"In general appearance the Yellow-bellied Warbler-Flycatcher resembles members of the genus *Phylloscopus* and

has much the same habits. It usually frequents young trees and thick undergrowth, and its call is a short 'cheep.'—
C. H. B. G.

Pseudogerygone palpebrosa.

Pseudogerygone palpebrosa (Wallace); Sharpe, Cat. iv. p. 230, pl. vi, (1879),

Gerygone palpebrosa Salvad, O. P. ii, p. 96 (1881); Roths. & Hartert, N. Z. xx, p. 497 (1913),

a, b, ♂ ♀. White Water Camp, Kaparé River, 600–1500 ft., 19th Oct. & 8th Nov, 1910. [Nos. 331, 462, *C. H. B. G.*]

c, ♂. Canoe Camp, Setakwa River, 25th Nov, 1912. [*C. B. K.*]

♂. Iris reddish-brown or blood-red; bill black; feet bluish-ash-colour.

♀. Iris russet; bill sooty-black, base of the lower mandible grey; feet bluish-ash-colour.

Both males are moulting in new primary quills; the female has evidently just completed its moult.

These specimens agree well with typical examples from the Aru Islands. The type is a *young* male procured by Wallace and not an *adult* as entered by Sharpe in the 'Catalogue.' There are, however, in the British Museum an adult pair from the Aru Islands procured by von Rosenberg, and six specimens, including three adult males from Silbattabatta, in the same group, collected by Mr. W. Goodfellow.

"The Black-throated Warbler-Flycatcher was met with in the thick fern-like undergrowth that abounds on the ridges of the hills around the Pygmy village of Wamberimi."—
C. H. B. G.

***Pseudogerygone conspicillata mimikæ*, subsp. n.**

Gerygone conspicillata, subsp. ? Roths. & Hartert, N. Z. xx, p. 498 (1913).

Adult male and female. Most nearly allied to *P. conspicillata* (Gray), but with the upperparts very dark olive-brown

tinged with greyish, instead of rather light brownish-olive with a slight rufous tinge.

Iris reddish-brown or crimson; bill black; feet bluish-ash-colour or pinkish-lavender. Wing 54 mm.; tail 39, in both male and female.

a, b. ♂ ♀. Mouth of the Mimika River, 20th & 23rd May, 1911. [Nos. 1208, 1250, *G. H. B. G.*] (*Types of the subspecies.*)

c-e. ♂ ♀. Mouth of the Mimika River, 16th-25th March, 1911. [Nos. 1174, 1268, 1284, *C. H. B. G.*]

f. ♂. Wakatimi, Mimika River, 6th March, 1911. [No. 1105, *C. H. B. G.*]

g. ♂. Launch Camp, Setakwa River, Oct. 1912. [*C. B. K.*]

The type of *P. conspicillata* (Gray) is in the British Museum; it is a female example procured by Wallace at Dorei.

A nest was found in a mangrove-swamp suspended from an overhanging branch. It is about 18 inches long and composed of various dried roots, creepers, and leaves, the lower part forming the nest, which has an entrance at the side with a sort of hood formed by the upper material; it is lined with fine rootlets and feathers.

There were four eggs in the nest, one of them belonging to a small species of Cuckoo, no doubt *Cacomantis assimilis* (see p. 184). The male Flycatcher was secured.

The eggs are of a rather long and somewhat pointed oval shape; the ground-colour is pinkish-white, finely speckled all over and spotted chiefly towards the larger end with light red; one egg is much more spotted than the other two; in all three under-markings of pale reddish-lilac are also present. They measure respectively, 18×13 , 18×13 , and 18×12 mm.

"The Mimika Warbler-Flycatcher was tolerably numerous in the mangrove-swamps along the coast, where it was usually observed in pairs. It had very Warbler-like actions and its call-note was a short 'cheep.'"—*C. H. B. G.*

Pseudogerygone cinerea.

Pseudogerygone cinerea (Salvad.) ; Sharpe, Cat. iv. p. 220 (1879).

Gerygone cinerea Salvad. O. P. ii. p. 104 (1881).

a. ♂. Camp 6 c, Utakwa River, 5500 ft., 25th Feb. 1912.
[C. B. K.]

This species was previously represented in the British Museum by two males procured at Bagutana Camp, Owen Stanley Mountains, 8000 ft., by Mr. W. Goodfellow. The male example from the Utakwa River agrees in almost every respect with the description of the type-specimen, also with a male from Hatam, North-west New Guinea, but the feathers of the crown, which are freshly moulted, some being still in quill, are uniform grey, and do not show blackish bases as mentioned by Sharpe in his description of the type-specimen.

The wing measures 53 mm. (= 2·2 inches); tail 33 (= 1·3 inches).

Pseudogerygone sp. inc.

a. ♀ imm. Mouth of the Mimika River, 20th March, 1911. [No. 1212; C. H. B. G.]

This bird, which is partially in young plumage, appears to be allied to *P. levigaster*, having very distinct subterminal white spots on the inner webs of the outer tail-feathers. The second primary quill falls between the 8th and 9th, and possibly the bird is a species of *Gerygone* and not a *Pseudogerygone*. The differences between the two genera appear to be rather difficult to define, and some modern authors unite all the species under *Gerygone*.

Æthomyias spilodera.

Æthomyias spilodera (Gray) ; Sharpe, Cat. iv. p. 271 (1879) ; Roths. & Hartert, N. Z. x. p. 475 (1903).

Æthomyias spilodera guttata van Oort (nec Sharpe), p. 84 (1909) ; Roths. & Hartert, N. Z. xx. p. 501 (1913).

a-i. ♂ ♀ et ♀ imm. White Water Camp, Kaparé River, 15th Oct.-8th Nov. 1910. [Nos. 313, 322, 323, 359, 360, 367, 381, 382, 461, *C. H. B. G.*]

k. ♂. Wataikwa River, 18th Oct. 1910. [No. 1897, *G. C. S.*]

l-o. ♂ ♀. Iwaka River, 30th Jan.-6th Feb. 1911. [Nos. 959, 988, 989, 1005, *C. H. B. G.*]

p-t. ♂ ♀ et ♂ imm. Camp 3, Utakwa River, 21st Nov. 1912-18th Jan. 1913. [*C. B. K.*]

Adult. Iris light brown to red ; bill brownish-flesh-colour ; legs slate-colour or purple-brown.

Young. Iris raw-sienna ; rest of the soft-parts coloured as in the adult.

All the specimens in the above series appear to be referable to the typical form of *Æ. spilodera*, though some examples nearly resemble the type of *Æ. s. guttata* (Sharpe), which is no doubt very closely allied.

The type of *Æ. spilodera* is a fully adult female example procured by Wallace at Dorei ; it has the crown sooty-black and the parts surrounding the eye, including the ear-coverts, dark sooty-brown. The wings, too, are browner than in any of the above series, but this may be partly due to wear.

The type-specimen of *Æ. s. guttata*, from the Choqueri District in the Astrolabe Mountains, is somewhat imperfect, but another adult from the same locality and specimens from the Kumusi River, also in South-east New Guinea, show that the top of the head is olive-brown tinged with rufous, and the parts surrounding the eye, as well as the ear-coverts, are dull snuff-brown.

In the above series there are six males (Nos. 382, 461, 959, 989, 1005, and an un-numbered specimen) which agree with Wallace's type in the dark coloration of the top of the head and sides of the face. These are in fresh plumage, having been killed between the 27th of October and the 6th of February. They are rather darker olive above than the type of *Æ. spilodera*, which inclines to brownish, especially on the wings ; the date when this bird was procured by Wallace is, unfortunately, not recorded.

Less mature specimens of *Æ. spilodera* closely resemble adult examples of *Æ. s. guttata*.

In quite young examples of *Æ. spilodera* the throat is white and unspotted, the chest very indistinctly marked, and the upperparts, including the crown, are brownish-olive tinged with rufous. In older birds as the spotting on the throat makes its appearance the upperparts become of a dark greenish-olive.

"This little Warbler-Flycatcher was only observed along the foothills or in the mountains, where it was quite common and could always be seen hopping about in the lower herbage and undergrowth, after the manner of a Warbler. It was usually observed singly, and generally at such close quarters that to shoot it was almost impossible. It has a short call-note."—*C. H. B. G.*

****Eugerygone rubra*.**

Gerygone (Eugerygone) rubra (Sharpe); Roths. & Hartert, N. Z. xx. p. 498 (1913).

Recorded from Mt. Goliath.

***Microeca flavovirescens*.**

Microeca flavovirescens Gray; Sharpe, Cat. iv. p. 125 (1879); Salvad. O. P. ii. p. 92 (1881); van Oort, p. 83 (1909); Roths. & Hartert, N. Z. xx. p. 495 (1913).

a. ♂. Upper Mimika River, 3rd May, 1910. [No. 1149, *G. C. S.*]

b-n. ♂ ♀ et ♂ juv. Parimàu, Mimika River, 10th Sept.—28th Dec. 1910. [Nos. 169, 261, 281, 481, 515, 589, 596, 800, 812, 854, *C. H. B. G.*; & 1476, 1477, *G. C. S.*]

o. ♂. Iwaka River, 28th Jan. 1911. [No. 948, *C. H. B. G.*]

p-r. ♂ ♀ et ♂ imm. Canoe Camp, Setakwa River, 20th—26th Nov. & 25th Dec. 1912. [*C. B. K.*]

Adult. Iris dark brown or hazel; upper mandible black or dark horn-colour, lower mandible pale yellow or orange-yellow; feet and toes dull yellow or olive.

Young. Iris brown; bill sooty-brown, gape pale yellow; feet and toes pale yellow.

The type of this species was collected by Wallace in the Aru Islands and is preserved in the British Museum.

Birds killed in September are in worn plumage, by early November they are nearly clean moulted, and, with one exception, all examples in the above series are in full plumage by the end of that month.

A young bird of this species resembles the young of *M. flavigaster*, described by Sharpe in the 'Catalogue of Birds.' The upperparts, including the top of the head, are brown with light brownish-white tips to the feathers, the back being interspersed with the dark olive-green plumage of the adult; the ear-coverts and cheeks are pale brown with a distinct whitish ring round the eye; the throat and middle of the breast and belly are white; the chest and sides of the body brown, like the upperparts, and with pale spots at the tips of the feathers. A few yellow feathers of the adult plumage are making their appearance at the base of the throat and on the middle of the chest.

"As a rule, this Olive and Yellow Flycatcher was seen singly in the lower branches of the taller trees, and was by no means easy to distinguish amongst the thick yellowish and greenish foliage."—*C. H. B. G.*

Microeca flavigaster.

Microeca flavigaster Gould; Sharpe, Cat. iv. p. 126 (1879); Roths. & Hartert, N. Z. x. p. 471 (1903).

Microeca flaviventris Salvad. O. P. ii. p. 93 (1881).

a. ♀. Mouth of the Mimika River, 22nd March, 1911. [No. 1237, *C. H. B. G.*]

Iris brown; bill olive-brown, base of lower mandible paler; gape yellow; feet sooty-black.

I cannot separate this individual specimen from typical *M. flavigaster* Gould, from Port Essington, though the yellow on the middle of the breast and belly is perhaps a little paler. The North Queensland bird, which has been separated as *M. f. terrareginae* by Mr. Mathews [*cf.* N. Z. xviii. p. 303

(1911)], is easily distinguishable. He has also separated the bird from Melville Island as *M. f. melvillensis* [cf. Aust. Av. Rec. i. p. 39 (1912)], but this should, no doubt, be referred to the typical form.

Microeca lata Salvad. Ann. Mus. Civ. Genov. xii. p. 323 (1878) from Wandammen, west of Geelvink Bay, appears to be a very closely allied form.

***Microeca griseiceps bartoni*, subsp. n.**

Microeca griseiceps Roths. & Hartert (nec De Vis), N. Z. x. p. 471 (1903) [Aroa].

In the collection of birds made by Mr. Walter Goodfellow in the Owen Stanley Mountains, there is a male example of a species of *Microeca*, which I cannot identify with certainty. There is also a female evidently referable to the same form from Dorawaida, presented to the British Museum by Capt. F. R. Barton. The species is perhaps identical with *Microeca griseiceps* De Vis [Ann. Rep. Brit. N. Guin. July 1893-June 1894, App. EE, p. 101 (1894)]. The male type of that species was obtained on Mt. Manaeao, 1400 ft., Gorupu Mountains, above Collingwood Bay. The birds from the southern slopes of the Owen Stanley range differ in several particulars, notably in having the chin and throat white in contrast to the chest, which is greyish-olive tinged with buff, and the lower breast and abdomen dull yellow, instead of lemon-yellow. Two examples in the Tring Museum from the Upper Mambare River, and from the Upper Aroa River, which are similar to the British Museum specimens, have been identified by Dr. Hartert as *M. griseiceps*, but the correctness of this determination seems to me doubtful.

It seems, however, probable that the true *M. griseiceps* from the northern coast has recently been re-described by Dr. Reichenow (J. f. O. 1915, p. 124) as *M. poliocephala* and that the southern birds represent a distinct subspecies.

Another close ally is *M. flavigaster* Gould, mentioned above, but the present form differs in having the top of the head and back of the neck dark grey, and the rest of the upper-parts darker and more olive in colour; the tail-feathers

dark brown, narrowly margined with olive, the outer pairs with the inner webs narrowly edged at the extremity with whitish; the yellow on the breast and belly darker and duller, and the upper breast and sides of the body washed with greyish-olive.

The particulars about our male specimen are as follows:—

Iris brown; upper mandible black, lower yellow; feet yellow.

Male. Wing 72; tail 55; tarsus 13.5 mm.

Female. „ 68; „ 50; „ 13 mm.

♂. Owen Stanley Range, 5000 ft., April, 1908, W. Goodfellow. } *Types of the*
 ♀. Dorawaida, 1100 ft. Capt. F.R. Barton. } *subspecies.*

Family HIRUNDINIDÆ.

**Petrochelidon nigricans*.

Petrochelidon nigricans (Vieill.); Sharpe, Cat. x. p. 190 (1885); id. & Wyatt, Monogr. Hirund. ii. p. 525, pl. 103 (1887); van Oort, p. 83 (1909).

Two specimens were taken on the Noord River in July.

Hirundo rustica gutturalis.

Hirundo rustica gutturalis Scop.; Sharpe, Cat. x. p. 134 (1885); id. & Wyatt, Monogr. Hirund. i. p. 241, pl. 40 (1893).

Chelidon rustica gutturalis Roths. & Hartert, N. Z. xx, p. 492 (1913).

a-e. ♂ et ♂ ♀ imm. Mouth of the Mimika River, 3rd & 20th Dec. 1910 and 19th March, 1911. [Nos. 34, 41, 42, 161, 1201, *C. H. B. G.*]

f. ♂ imm. Parimâu, Mimika River, 18th Nov. 1910. [No. 521, *C. H. B. G.*]

g. ♂ imm. Wataikwa River, 28th Oct. 1910. [No. 1449, *G. C. S.*]

The adult male (No. 161) has the fore-neck chestnut interrupted by a few blue feathers; the underparts are washed with rufous-buff, strongest on the under tail-coverts; in six

young birds the underparts are white, but in Nos. 34 and 1201 there are indications of rufous feathers on the breast and under tail-coverts and both these specimens, as well as No. 42, have a more or less complete blackish band across the fore-neck.

"The Eastern Chimney-Swallow apparently occurs on migration only, as it was seen intermittently. In November, great numbers were hawking over the open space round our camp at Parimau for a few days, and then suddenly disappeared. They were also seen on other occasions, but never for any length of time."—*C. H. B. G.*

***Hirundo javanica*.**

Hirundo javanica Sparrm. ; Sharpe, Cat. x. p. 142 (1883) ; id. & Wyatt, Monogr. Hirund. i. p. 279, pl. 47 (1892).

Chelidon javanica Roths. & Hartert, N. Z. xx. p. 492 (1913).

a. ♂. Wataikwa River, 19th Sept. 1910. [No. 1188, *G. C. S.*]

Iris dark brown ; bill black ; legs dark brown.

Total length in the flesh 135 mm. (=5 $\frac{3}{8}$ inches).

In the Catalogue, p. 143, line 9, Sharpe describes the under tail-coverts in this species as smoky-brown margined conspicuously with *rufous*, but, as a matter of fact, they are margined with *white*. On the following line for "longer tail-feathers" read "longer *under* tail-coverts" which have a well-marked blackish subterminal patch.

Family PITTIDÆ.

***Melopitta gigantea*.**

Melopitta gigantea Roths. Orn. Monatsb. vii. p. 137 (1899) ; Roths. & Hartert, N. Z. xx. p. 491 (1913).

a. ♀. Camp 3, Utakwa River, 2500 ft., 14th Dec. 1912. [*C. B. K.*]

The plumage of this specimen is entirely black. The bill measured from the nasal opening to the tip is 24 mm. (35 mm. from the feathers on the forehead to the tip) ; wing 133 mm. ; tail 123 ; tarsus 56. On comparison, it will

be seen that our bird from the Utakwa nearly resembles in size the type-specimen from Humboldt Bay. The measurements of the latter are : bill 26 mm. ; wing 135 ; tail 120 ; tarsus 60.

The male obtained by A. S. Meek on the Utakwa River, 3000 ft., appears to be a somewhat smaller individual. It measures : bill 23 mm. ; wing 129 ; tail 115 ; tarsus 58.

I am doubtful whether this large species, with its long tail extending beyond the toes, should not be placed in a separate genus ; in other respects it resembles *M. lugubris* in general structure and in having long disintegrated feathers on the back, which form a dense soft "puff" on the lower back and rump.

The species is new to the British Museum.

***Melopitta lugubris rostrata*.**

Melopitta lugubris rostrata Ogilvie-Grant, Bull. B. O. C. xxxi. p. 104 (1913).

a. ♂. Camp 6 B, Utakwa River, 4200 ft., 26th Jan. 1913. [*C. B. K.*] (*Type of the subspecies.*)

This specimen is similar to *M. lugubris* Schleg., but larger and with a conspicuously stouter bill. Total length about 170 mm. ; culmen 24 ; wing 89 ; tail 52 ; tarsus 41.

Of *M. lugubris* the British Museum possesses two examples, one a male from the Aroa River procured by E. Weiske, and the other a female from Arfak obtained by L. Laglaize. In the Tring Museum there are five examples from the Aroa and Angabunga Rivers.

***Pitta atricapilla*.**

Pitta atricapilla Quoy & Gaim. Voy. Astrolabe, Zool. i. p. 258, pl. viii. fig. 3 (1830) ; Roths. & Hartert, N. Z. viii. p. 62 (1901), xx. p. 492 (1913).

Pitta novæ-guinæe Müll. & Schl. ; Sclater, Cat. xiv. p. 440 (1888) ; van Oort, p. 82 (1909) ; Ogilvie-Grant, P. & P. p. 281 (1912) ; id. Ibis, 1913, p. 94.

a-d. ♂ ♀. Wakatimi River, 24th & 28th Dec. 1910 and 1st Jan. 1911. [Nos. 176, 178, 193, 201, *C. H. B. G.*]

e-g. ♂. Parimau, Mimika River, 6th Sept. & 16th Nov. 1910 and 10th Jan. 1911. [Nos. 150, 893, *C.H.B.G.*; & 1519, *G.C.S.*]

h, i. ♂ ♀. Launch Camp, Setakwa River, 6th Oct. 1912. [*C. B. K.*]

k, l. ♂ ♀. Canoe Camp, Setakwa River, 12th Nov. 1912. [*C. B. K.*]

Iris dark brown; bill black; feet livid flesh-colour to deep flesh-colour.

Total length in the flesh 177 mm. (=7 inches).

There can be no doubt that *Pitta atricapilla* Quoy and Gaimard is the oldest name for this bird.

The amount of white on the 4th and 5th primary quills varies much in different individuals, but the majority have a white spot on the 4th and 5th primary quills. In a fine old male (No. 193), with the breast and sides of the belly mostly purplish-blue, the white is reduced to a small spot on the basal third of the inner web; in an equally fine adult female (No. 178) the spots are somewhat larger, and that on the 5th quill extends across the outer web. Two younger females, with the breast and sides of the belly golden-green slightly edged with purplish-blue, vary still further: in No. 176 the spots are somewhat like those of the adult female No. 178, while in No. 201 the white patch on the 4th and 5th quills is larger and extends across the outer webs; there is also a small white spot on either web of the 6th quill. One specimen from Canoe Camp, Setakwa River, has no white on the quills, the position of the spots being merely indicated by a short white line on the shafts of the 4th and 5th quills. The amount of white does not seem to be dependent on age.

"The New Guinea Green Pitta was observed at Parimau, where it was decidedly scarce, but round Wakatimi it was by no means uncommon. Its habits and actions are similar to those of *P. mackloti*; but, according to our Dyak collectors, the call is quite different, though I was never fortunate enough to hear it."—*C. H. B. G.*

***Pitta mackloti*.**

Pitta mackloti Temm.; Sclater, Cat. xiv. p. 436 (1888); van Oort, p. 83 (1909); Ogilvie-Grant, P. & P. p. 281 (1912); id. Ibis, 1913, p. 93; Roths. & Hartert, N. Z. xx. p. 492 (1913).

a-d. ♂ ♀. Upper Mimika River, 27th Jan., 28th Feb., & 3rd April, 1910. [Nos. 1007, 1099, 1100, 1123, *G. C. S.*]

e-r. ♂ ♀ et ♀ imm. Parimau, Mimika River, 13th Sept. 1910-8th Jan. 1911. [Nos. 182, 212, 746, 809, 810, 815, 821, 832, 833, 843, 858, 892, *C. H. B. G.*]

s. ♂. White Water Camp, Kaparé River, 4000 ft., 20th Oct. 1910. [No. 343, *C. H. B. G.*]

t. ♂. Tuaba River, 14th Sept. 1910. [No. 1166, *G. C. S.*]

u-d'. ♂ ♀ et ♀ imm. Wataikwa River, 17th Sept.-21st Oct. 1910 and 4th Feb. 1911. [Nos. 1173, 1181, 1182, 1191, 1280, 1395, 1396, 1402, 1418, *G. C. S.*]

e'-f'. ♂ ♀. Iwaka River, 26th Jan. & 4th Feb. 1911. [Nos. 920, 990, *C. H. B. G.*]

g'-l'. ♂ ♀ et ♀ imm. Launch Camp, Setakwa River, 3rd-27th Oct. 1912 and 21st March, 1913. [*C. B. K.*]

m'-u'. ♂ ♀ et ♀ imm. Canoe Camp, Setakwa River, 13th-28th Nov. & 7th Dec. 1912. [*C. B. K.*]

Iris brown; upper mandible black, lower dark brown; feet plumbeous, tarsi paler.

Total length in the flesh 195-210 mm. ($=7\frac{3}{4}$ - $8\frac{1}{4}$ inches).

As in *P. atricapilla*, the amount of white on the primary quills varies individually. It may extend from the inner web of the 2nd quill to the outer web of the 5th, or from the 3rd to the 5th, or again from the 3rd to the 4th only.

The young of this species seems to attain the adult plumage at the first moult, passing straight from the brown dress of immaturity to that of the adult. Young birds about a month or six weeks old were obtained from September to December, and by the 28th of November many had assumed the greater part of the adult plumage. By the following March they are practically indistinguishable from the adult, but down the middle of the belly a few sandy-brown feathers may still be detected.

The adult female may generally be distinguished from the adult male by having the chin, upper half of the throat, and cheeks sooty-brown instead of black.

"The New Guinea Scarlet-breasted Pitta was observed everywhere excepting near Wakatimi and on the coast. It was usually to be seen in pairs, sometimes in lots of three, and though by no means rare, was not always easy to see in the dense undergrowth. It had a rather loud call and was very active."—*C. H. B. G.*

Family CUCULIDÆ.

Calliechthrus leucolophus.

Calliechthrus leucolophus (Müll.) ; Shelley, Cat. xix, p. 225 (1891) ; van Oort, p. 68 (1909) ; Roths. & Hartert, N. Z. xx, p. 490 (1913).

a. ♂. Wakatimi, Mimika River, 28th Dec. 1910. [No. 194, *C. H. B. G.*]

b, c. ♀ et ♀ juv. Upper Mimika River, 26th March & 23rd May, 1910. [Nos. 1104, 1164, *G. C. S.*]

d, e. ♀. Parimau, Mimika River, 30th Aug. & 27th Nov. 1910. [Nos. 45, 590, *C. H. B. G.*]

f, g. ♂. Iwaka River, 31st Jan. & 10th Feb. 1911. [Nos. 966, 1012, *C. H. B. G.*]

h, i. ♂. Launch Camp, Setakwa River, 27th & 28th March, 1913. [*C. B. K.*]

k. ♀. Canoe Camp, Setakwa River, 5th Nov. 1912, [*C. B. K.*]

Iris brown ; bill black ; feet ash-colour.

Total length in the flesh 350 mm. (=14 inches).

The various plumages of this species are worthy of note.

In quite young birds the first downy plumage of the underparts is very dark sooty-brown, and there are no white margins to any of the feathers of the breast or under tail-coverts. In the next plumage the feathers of the breast are greyish-black, slightly glossy and mostly edged with white ; the under tail-coverts are tipped and barred irregularly or transversely with white ; the amount of the barring, however,

varies greatly, and is not alike in any two individuals in the series before me. In the fully adult bird the breast is uniform greyish-black, and only one or two of the longest under tail-coverts are narrowly tipped with white.

"The White-crowned Black Cuckoo was heard and found everywhere, though it was much more plentiful in the mountains, and was especially so around my highest camp on the Iwaka River. It is rather a wild bird with a strong flight, and, as a rule, frequents the higher trees. The call consists of three distinct whistles, and is, as far as I can remember, exactly similar to that of *Cuculus solitarius* of Africa."—*C. H. B. G.*

Cuculus optatus.

Cuculus intermedius Shelley (nec Vahl), Cat. xix. p. 252 (1891).

Cuculus optatus Gould ; Roths. & Hartert, N. Z. xx. p. 489 (1913).

a, b. ♀ et ♂ imm. Mouth of the Mimika River, 10th Dec. 1910 & 23rd March, 1911. [Nos. 102, 1243, *C. H. B. G.*]

c, d. ♂ imm. et ♂ juv. (in first plumage). Parimau, Mimika River, 9th & 17th Nov. 1910. [Nos. 1493, *G. C. S.*; & 508, *C. H. B. G.*]

e. ♂. Launch Camp, Setakwa River, 31st March, 1913. [*C. B. K.*]

f. ♀ imm. (in the hepatic stage). Canoe Camp, Setakwa River, 16th Nov. 1912. [*C. B. K.*]

Adult. Iris yellow ; eyelid yellow ; upper mandible horn-brown, lower mandible yellow, dark at the tip ; feet bright ochre.

Immature. Iris dark brown ; bill black above, basal half of lower mandible yellow ; gape orange ; feet deep yellow.

These specimens vary considerably in size :—

♂ adult (<i>e</i>).	Wing	194 mm.
♀ adult (<i>a</i>).	„	191 „
♂ imm. (<i>c</i>).	„	199 „
♂ imm. (<i>b</i>).	„	195 „
♂ imm. (<i>d</i>).	„	179 „
♀ imm. (<i>f</i>).	„	180 „

"A few examples of this Cuckoo were met with occasionally. They frequented posts and stumps of trees in the clearings around the camps. They uttered no call, and were by no means wild."—*C. H. B. G.*

****Cacomantis variolosus*.**

Cacomantis variolosus Horsf. ; Shelley, Cat. xix. p. 272 (1891) ; Roths. & Hartert, N. Z. xx. p. 489 (1913).

A young male is recorded from the Setakwa River, obtained in June.

***Cacomantis excitus*.**

Cacomantis excitus Roths. & Hartert, N. Z. xiv. p. 436 (1907).

a. ♂. Camp 6 c, Utakwa River, 5500 ft., 18th Feb. 1913. [*C. B. K.*]

This interesting Cuckoo was met with a little higher up the Utakwa River than *C. castaneiventris*, of which it is, perhaps, a larger representative form in the high mountains. Messrs. Rothschild and Hartert, who enumerate several examples of this species (*op. cit.*), mention a nestling obtained on Mt. Knutsford at 11,000 ft.

This species is new to the British Museum.

***Cacomantis castaneiventris*.**

Cacomantis castaneiventris Gould ; Shelley Cat. xix. p. 274 (1891) [part.] ; Roths. & Hartert, N. Z. xx. p. 489 (1913).

a. ♂. Launch Camp, Setakwa River, 27th March, 1913. [*C. B. K.*]

b, c. ♂. Camp 6 b, Utakwa River, 4200 ft., 4th & 5th Feb. 1913. [*C. B. K.*]

I am not fully satisfied that these three birds have been rightly referred to typical *C. castaneiventris*. Compared with the type-specimen from Cape York and with birds from the Astrolabe Mountains, they seem rather darker, especially on the underparts, and slightly larger.

The wing-measurements of the three are 115, 115, and 116 mm., as compared with 112 (type), 112, and 112 mm. (Astrolabe Mts.).

Cacomantis castaneiventris arfakianus.*Cacomantis arfakianus* Salvad. O. P., Agg. i. p. 49 (1889).*Cacomantis castaneiventris* Shelley, Cat. xix. p. 274 (1891) [part.].*a.* ♀. Mimika River, 31st March, 1910. [No. 1118, *G. C. S.*]*b, c.* ♂ ♀. Parimau, Mimika River, 22nd Sept. & 1st Oct. 1910. [Nos. 233, 279, *C. H. B. G.*]*d, e.* ♂ ♀. Wataikwa River, 26th Sept. & 31st Oct. 1910. [Nos. 1257, 1559, *G. C. S.*]*f.* ♂ juv. Iwaka River, 25th Jan. 1911. [No. 916, *C. H. B. G.*]

Iris brown; orbits lemon-yellow; bill dark olive-brown (black in one specimen); gape orange; feet lemon-yellow or bright ochre.

These birds seem to be undoubtedly referable to *C. c. arfakianus* Salvad., and agree with the description in being smaller and paler both above and below, but I do not find that the bill is longer than in typical *C. castaneiventris*.

Total length in the flesh 223–234 mm. (= 8·8–9·2 inches).

Measurements: ♂. Wing 109 mm. ♀. Wing 108 mm.

♂. „ 109 „ ♀. „ 106 „

♀. „ 105 „

In typical *C. castaneiventris* the wing-measurement is 112 mm.

As in the young of *C. castaneiventris* Gould, the young of *C. c. arfakianus* has the general colour of the upperparts dark vandyke-brown, becoming rather more rufous on the rump and upper tail-coverts, which are indistinctly barred with blackish; the tail-feathers black margined and toothed along the edges with rufous; and the underparts brownish-buff, faintly mottled with dusky and shading into buff on the middle of the belly and pale chestnut on the under tail-coverts. Wing 104 mm.

Iris dark brown; orbits yellowish; bill sooty-black, lemon-yellow at the gape; feet lemon-yellow, dusky on the front of the tarsi and toes.

"This Chestnut-bellied Cuckoo was a scarce bird and very retiring in its habits. It frequented the denser foliage of the trees and was difficult to see and secure."—*C. H. B. G.*

Cacomantis assimilis.

Cacomantis insperatus (Gould); Shelley, Cat. xix. p. 273 (1891) [part.].

Cacomantis assimilis Gray; Roths. & Hartert, N. Z. xiv. p. 434 (1907); van Oort, p. 68 (1909); Roths. & Hartert, N. Z. xx. p. 489 (1913).

a-e. ♂ et ♂ ♀ imm. Mouth of the Mimika River, 12th Dec. 1910 & 14th–24th March, 1911. [Nos. 128, 1157, 1190, 1216, 1273, *C. H. B. G.*]

f. ♂. Wataikwa River, 15th Oct. 1910. [No. 1376, *G. C. S.*]

The type-specimen of *C. assimilis* Gray, obtained by Wallace in the Aru Islands, is an immature female. Among the series of birds listed above an immature male, specimen *c* (No. 1190), most nearly resembles the type as regards the colour of the underparts, but all have the upperparts darker except perhaps specimen *f*, which is of an intermediate shade. In the present collection all the adult specimens have the lower back, rump, and upper tail-coverts bronze-brown washed with grey and the middle pair of tail-feathers blackish, while in the type-specimen they are bronze-brown. These differences are no doubt due to age and season.

A young female, specimen *d* (No. 1216), is in the hepatic plumage of immaturity, the upperparts being blackish barred with chestnut, or buff on the secondaries, and the underparts white barred with black, from the chin to the under tail-coverts.

An egg, almost certainly of this species, was found in a nest of *Gerygone conspicillata mimikæ* in the mangrove-swamp at the mouth of the Mimika. It is of a long, rather pointed, oval shape, slightly glossy, and of a uniform dark olive-brown. It measures 23×14 mm.

"This Cuckoo seemed to be scarce inland, but was fairly common in the casuarinas and mangroves along the coast,

where it was observed singly. We were unable to identify the various call-notes of the species of *Cacomantis*.”—*C. H. B. G.*

***Chalcococcyx meyeri*.**

Chalcococcyx meyeri (Salvad.); Shelley, Cat. xix. p. 293 (1891).

Chrysococcyx meyeri Roths. & Hartert, N. Z. xx. p. 489 (1913).

a, b. ♀. Camp 6 A, Utakwa River, 2900 ft., 10th & 13th Jan. 1913. [*C. B. K.*]

The male of this beautiful little Glossy Cuckoo has the head green; in the female the forehead and crown are chestnut.

***Chalcococcyx pæcilurus*.**

Chalcococcyx pæcilurus (Gray); Shelley, Cat. xix. p. 299 (1891); van Oort, p. 68 (1909).

a-c. ♂ ♀. Mouth of the Mimika River, 14th & 23rd March, 1911. [Nos. 1149, 1244, 1247, *C. H. B. G.*]

d. ♂ juv. Parimau, Mimika River, 24th Dec. 1910. [No. 811, *C. H. B. G.*]

e. ♀. Launch Camp, Setakwa River, 7th Oct. 1912. [*C. B. K.*]

Adult. Iris rich brown; orbital skin pale greenish; bill black, lower mandible horn-colour; feet dark slate-colour.

These specimens agree well with the type-specimen of *C. pæcilurus* Gray, procured by Wallace on Misol; it is marked female and the wing measures 99 mm. Our specimens measure: ♂ 101, ♀ 102, ♀ 100, ♀ 95.

“This Glossy Cuckoo was a tolerably common species on the coast and had much the same habits as *Cacomantis assimilis*.”—*C. H. B. G.*

***Eudynamis rufiventer*.**

Eudynamis cyanocephala (Lath.); Shelley, Cat. xix. p. 324 (1891) [part., specimen “*o*’ ♂ ad. sk. Dorei. Wallace Coll.”]; van Oort, p. 68 (1909).

Eudynamis orientalis rufiventer (Less.) ; Roths. & Hartert, N. Z. x. p. 238 (1903) ; xiv. p. 440 (1907).

a. ♂ imm. Wakatimi, Mimika River, 3rd April, 1911. [No. 1290, *C. H. B. G.*]

b-d. ♂ ♀. Launch Camp, Setakwa River, 8th Oct. 1912 & 15th & 26th March, 1913. [*C. B. K.*]

Under the heading *Eudynamis rufiventer*, Shelley has catalogued birds from New Britain, Duke of York Island, and the Solomon Islands. Those from the two first-named localities have been separated as *E. o. salvadori* Hartert, on account of their slightly larger size, while the bird from the Solomon Islands has been separated by the same author as *E. o. alberti* Hartert. Dr. Hartert has designated Dorei as the type-locality of *E. rufiventer*. Our adult bird seems to agree with the typical specimen from Dorei, procured by Wallace, and wrongly referred by Shelley to *E. cyanocephala*.

****Eudynamis minima*.**

Eudynamis rufiventer van Oort (nec Lesson), p. 69 (1909).

Eudynamis minima van Oort, Notes, xxxiv. p. 54 (1911).

Described from a single specimen from the Noord River.

***Microdynamis parva*.**

Microdynamis parva (Salvad.) ; Finsch & Meyer, Zeit. ges. Orn. iii. p. 12, pl. v. fig. 2 (1886) ; Sharpe in Gould, Birds N. Guinea, pl. xli. (1888) ; Shelley, Cat. xix. p. 328 (1891) ; Roths. & Hartert, N. Z. xiv. p. 440 (1907) ; Ogilvie-Grant, P. & P. p. 282 (1912) ; id. Ibis, 1913, p. 94.

a. ♀ Wakatimi, Mimika River, 23rd Aug. 1910. [No. 20, *C. H. B. G.*]

b. ♂. Iwaka River, 27th Jan. 1911. [No. 926, *C. H. B. G.*]

Male. Iris bright red ; orbits sooty ; bill sooty-black ; feet dark ash-colour.

Female. Iris hazel ; bill black ; feet slate-colour.

An adult male and adult female of this rare Cuckoo, called by Gould the "Dwarf Koel," form a very valuable

addition to the British Museum. The collection contained two specimens—a young male, wrongly marked “♀,” and an immature bird—both procured by Dr. Forbes at Sogeri in the Astrolabe Mountains.

The adult male from the Iwaka River seems to agree with the plate given by Finsch and Meyer (*op. cit.*), and with the description furnished by Shelley in the Catalogue of Birds: but the narrow white tips of the tail-feathers are neither figured nor described.

The bird described by Shelley as an adult female “with a broad, glossy greenish-black collar at the base of the neck” is, as stated above, certainly immature and almost certainly a young male and not a female as determined by the collector. Dr. Forbes’s specimen is also figured by Sharpe in Gould (*op. cit.*) as an adult female. In the female specimen from Wakatimi, which appears to be an adult, the entire head and neck are uniform brown, almost concolorous with the back, and the throat is grey mottled with whitish-buff, with the exception of a few buff feathers with broken ends which are apparently remains of the immature plumage. There is a distinct whitish band across the cheeks, as in the male, but less clearly defined, and bordered above and below by the ear-coverts and lower parts of the cheeks, which are brown like the crown. Messrs. Rothschild and Hartert have, I find arrived at the same conclusion.

The male (*b*) measures :—Wing 106 mm., tail 97.

The female (*a*) measures :—Wing 104 mm., tail 84.

The birds procured by Dr. Forbes at Sogeri measure :—

? Immature male (marked female) : Wing 99 mm., tail 88.

Immature (sex not marked) : Wing 102 mm., tail 86.

Count Salvadori gives the wing-measurement of the type-specimen as 111 mm. This apparent difference in size is probably due to a difference in his method of measuring over the wing. The type-specimen is said to be a female, but has the top of the head, nape, and moustachial streaks shining black as in the male. In this case also I have very little doubt that a mistake has been made by Beccari’s collector in ascertaining the sex.

Ramsay [P. L. S. N. S. Wales, viii. p. 23 (1883)] re-described this species under the name of *Rhamphomantis rollesi* from specimens procured by Mr. Rolles in the Astrolabe Mountains. He describes the adult male with a black head, agreeing perfectly with our specimen *b*; his female is obviously immature and agrees with the younger specimens obtained by Dr. Forbes.

Examples of this little Cuckoo are so rarely procured that few specimens are available for comparison; there are, however, twelve specimens in the Tring Museum.

Centropus menebiki.

Centropus menebiki Less. & Garn.; Shelley, Cat. xix. p. 336 (1891); van Oort, p. 69 (1909); Ogilvie-Grant, P. & P. p. 282 (1912); id. Ibis, 1913, p. 94.

Centropus m. menebeki Roths. & Hartert, N. Z. xx. p. 490 (1913).

a. ♂. Wakatimi, Mimika River, 11th Jan. 1910. [No. 1003, *G. C. S.*]

b. ♀ imm. Upper Mimika River, 7th March, 1910. [No. 1094, *G. C. S.*]

c-h. ♂ ♀ et ♀ imm. Parimàu, Mimika River, 5th Sept.-14th Dec. 1910. [Nos. 139, 158, 172, 598, 735, *C. H. B. G.*; 1470, *G. C. S.*]

i. ♂. Wataikwa River, Aug. 1910. [*W. G.*]

k. ♂. Iwaka River, 14th Sept. 1910. [No. 1167, *G. C. S.*]

l. ♂. Launch Camp, Setakwa River, 3rd Oct. 1912. [*C. B. K.*]

m. ♂. Canoe Camp, Setakwa River, 25th Oct. 1912. [*C. B. K.*]

Total length in the flesh about 680 mm. (=27 inches).

Adult. Iris blood-red; bill bluish pearl-colour or greyish-blue, black towards the base; feet slate-colour or black.

Young. Iris bright ochre-yellow.

Two younger female examples (Nos. 1094 & 139 in the above series) have the tail-feathers regularly barred with rufous-chestnut.

This species is easily recognised from the allied *C. bernsteini*

by its much larger size, light-coloured bill, and stout curved hind claw.

"The Menebiki Cuckoo was quite a common species, and spent most of its time on the ground. When alarmed it flew heavily into the low undergrowth or shrubs, where it generally remained quiet, but was easily seen and secured. It had a loud harsh alarm-note."—*C. H. B. G.*

***Centropus bernsteini*.**

Centropus bernsteini Schleg. ; Shelley, Cat. xix. p. 338 (1891) ; Ogilvie-Grant, P. & P. p. 282 (1912) ; id. Ibis, 1913, p. 94 ; Roths. & Hartert, N. Z. xx. p. 490 (1913).

a-d. ♂ ♀. Wakatimi, Mimika River, 22nd Aug. & 21st Nov. 1910, and 1st Jan. 1911. [Nos. 1537, *G. C. S.* ; 3, 205, 210, *C. H. B. G.*]

Iris dark brown ; bill and feet black.

Total length in the flesh 470 mm. (=18 $\frac{3}{4}$ inches).

This Lark-beeled Cuckoo is readily distinguished from the larger *C. menebiki* by its black bill and long, nearly straight hind claw.

"This Cuckoo seemed to occur near the coast only. It was partly a ground-bird, and very skulking in its habits."—*C. H. B. G.*

****Centropus nigricans*.**

Centropus nigricans Salvad. ; Shelley, Cat. xix. p. 339 (1891).

Centropus phasianus nigricans van Oort, p. 69 (1909).

Adult and young examples of the Blackish Lark-beeled Cuckoo were collected at Merauke.

***Scythrops novæ-hollandiæ*.**

Scythrops novæ-hollandiæ Lath. ; Shelley, Cat. xix. p. 330 (1891) ; Roths. & Hartert, N. Z. xiv. p. 441 (1907).

a. ♂ imm. Launch Camp, Setakwa River, 13th March, 1913. [*C. B. K.*]

Bill fleshy-brown ; feet lavender ; tarsal scutes and scales brownish.

The Channel-bill Cuckoo was only met with by the Wollaston Expedition.

Family CYPSELIDÆ.

Collocalia whiteheadi.

Collocalia whiteheadi Ogilvie-Grant, Ibis, 1895, p. 459; id. P. & P. p. 283 (1912); id. Ibis, 1913, p. 95; Roths. & Hartert, N. Z. xx. p. 491 (1913).

a. ♂. Parimàn, Mimika River, 29th Nov. 1910. [No. 616, *C. H. B. G.*]

Iris dark brown; bill black; feet purple-brown.

The occurrence of this large fork-tailed Swift in New Guinea is of considerable interest. Meek also procured a specimen on Mt. Goliath, 5000 ft. It was originally described from the Philippine Islands from specimens procured by Whitehead near the summit of Mt. Data, 8000 ft., North-west Luzon; it is also found in Palawan.

It is easily distinguished from *C. lowi*, the only other species of this group approaching it in size, by having the tail distinctly forked and the tarsi entirely devoid of feathers. *C. lowi* was described from Labuan, and is also found in Borneo, Palawan, and Sumatra.

Collocalia fuciphaga vanikorensis.

Collocalia fuciphaga Thunb.; Ogilvie-Grant, Ibis, 1895, p. 461 [part.]; van Oort, p. 82 (1909); Roths. & Hartert, N. Z. xx. p. 491 (1913).

Collocalia fuciphaga vanikorensis (Quoy & Gaim.); Oberholser, P.U.S. Nat. Mus. 42. p. 19 (1912).

a. ♂. Tuaba River, 14th Sept. 1910. [No. 1168, *G. C. S.*]

b-e. ♂. Launch Camp, Setakwa River, 2nd & 3rd Nov. 1912, and 13th March, 1913. [*C. B. K.*]

Iris dark brown; bill black; feet dusky brown.

Total length in the flesh 115 mm. (=4.5 inches).

These examples of *Collocalia* from the coast region appear to be referable to *C. f. vanikorensis*. They are much less smoky-brown on the underparts than typical examples of *C. fuciphaga* from Java.

The measurements are as follows :—

	Wing.	Tail.
	mm.	mm.
Tuaba River	117	49
Setakwa River	117	48
	116	49
	115	45 (worn)
	111	47

Mr. Oberholser [*cf.* P.U.S. Nat. Mus. 42. pp. 11–20 (1912)] has reviewed this species, and recognises a number of subspecies. Later Mr. Stresemann has further added to the number. Some of the races described by these authors seem to be tolerably distinct, but it is certain that too many have been recognised. The *C. fuciphaga* group is a very difficult one, and even with the resources of the British Museum and the Tring Museum at one's disposal it is difficult to decide as to the validity of some of the names: it will thus be easily understood that the founding of new races of the *C. fuciphaga* group on single specimens, such as the type of *C. f. ærophila* Oberholser, from Nias Island, should not be lightly undertaken. I am, however, obliged to describe a new highland form from the Snow Mountains, of which we possess but two specimens.

Collocalia hirundinacea.

Collocalia fuciphaga hirundinacea Stresemann, Verh. Orn. Ges. Bayern, xii. p. 7 (1914).

a. ♀. Upper Mimika River, 11th Feb. 1910. [No. 1046, *G. C. S.*]

b-h. ♂ ♀. Parimau, Mimika River, 14th Sept.–23rd Dec. 1910. [Nos. 190, 677, 717, 802, 803, 807, 808, *C. H. B. G.*]

i. ♂. Wataikwa River, 21st Sept. 1910. [No. 1215, *G. C. S.*]

This species is new to the British Museum and is easily recognisable by its uniform whitish-grey, almost silvery-grey underparts.

Iris dark brown; bill black; feet dark brown.

Total length in the flesh 117 mm. (= 4·6 inches).

The measurements are as follows :—

	Wing. mm.	Tail. mm.
♂. Parimàu	120	51
♂. Wataikwa R.	118	49
♂. Parimàu	118	48
♂. „	117	51
♂. „	117	50
♂. „	116	50
♂. „	116	49
♀. „	119	49
♀. Upper Mimika R. ...	116 (in moult)	49

Mr. Stresemann, in his original description, based on specimens in the Tring Museum collected by A. S. Meek on the Setakwa River, states that the tarsus is unfeathered in this species; but this is not really the case, as is proved by our series, while a careful examination of the series in Tring reveals the fact that feathers are present on some of those specimens also. The small feathers on the tarsi are very easily rubbed off either in the skinning or by the thread fastening the label, and the character is one not altogether to be relied on.

“This little Swift was an exceedingly common species, and was seen everywhere hawking over the tops of the jungle. Looking down from the mountains over the jungle below, it might be seen in hundreds, and was quite one of the features of the landscape. Towards evening it would come down and hawk along the rivers, and it was at such times that we were able to secure specimens.”—*C. H. B. G.*

Collocalia hirundinacea excelsa.

Collocalia hirundinacea excelsa Ogilvie-Grant, Bull. B.O.C. xxxv. p. 34 (1914).

a, b. ♂ ♀. Camp 11, Utakwa River, 8000 ft., 8th Feb. 1913. [*C. B. K.*] (*Types of the subspecies.*)

Adult male and female. Similar to *C. hirundinacea* Stresemann, but much larger and with the quills of the wings

and tail much wider, the middle rectrices measuring about 13.5 mm. in width, as compared with 11 mm. in *C. hirundinacea*. The upperparts are dark smoky-black, glossed with greenish on the scapulars and upper tail-coverts and purplish on the tail; the underparts are uniform dull silvery-grey or greyish-white.

The measurements are as follows :—

♂. Wing 127, tail 56 mm.

♀. „ 131, „ 63 mm.

The two specimens represent a larger, longer-winged mountain-race of *C. hirundinacea* Stresemann, which was only met with on the low ground by the B.O.U. Expedition to the Mimika River, and described from specimens procured by A. S. Meek on the Setakwa River.

In the Tring Museum there is a female example of *Collocalia* from Kanai, 1000 ft., Great Natuna Island, killed in July 1894. This bird has a wing-measurement of 127 mm. and closely resembles the two examples of *C. h. excelsa* from the Snow Mountains described above and appears to be referable to that subspecies.

Collocalia nitens.

Collocalia nitens Ogilvie-Grant, Bull. B. O. C. xxxv. p. 35 (1914).

a. ♂. Camp 6 A, Utakwa River, 2900 ft., 8th Jan. 1913.
[*C. B. K.*] (*Type of the species.*)

This species seems to occupy an intermediate position between *C. linchi* Horsf. & Moore and *C. esculenta* (Linn.), having metallic upperparts like the latter and an unspotted tail like the former. The upperparts are purplish-blue, the crown and mantle being as brightly coloured as the rest of the upperparts. In this respect it is unlike any subspecies of the *C. linchi* group. It resembles *C. esculenta*, especially examples in the British Museum from Northern Queensland, which have the white spots on the inner webs of the tail-feathers much reduced in size. In *C. nitens* the white markings on the tail-feathers are entirely wanting. The present species is further characterised by having the middle

of the breast and belly uniform white and by its small size. Wing 92 mm., tail 37.

The birds of this group have been dealt with by Mr. Oberholser [Pr. Acad. Philad. lviii. pp. 204-212 (1906)] and by Mr. Stresemann [Nov. Zool. xix. pp. 347-349 (1912)]. These authors have recognised a number of subspecies, and some at least appear to be quite insufficiently characterised, the sole distinguishing feature being a very slight difference in the size, which varies somewhat individually.

***Collocalia esculenta maxima*.**

Collocalia esculenta maxima Ogilvie-Grant, Bull. B.O.C. xxxv. p. 35 (1914).

a. ♀. Camp 11, Utakwa River, 8000 ft., 8th Feb. 1913. [*C. B. K.*] (*Type of the subspecies.*)

This large mountain-form of *C. esculenta* (Linn.) differs from the typical form in its much larger size, the wing measuring 115 mm. and the tail 51, as compared with wing about 100 mm. and tail about 40 in *C. esculenta*. A precisely similar instance of a smaller coastal form and larger mountain form is to be found in *C. hirundinacea* and *C. h. excelsa*.

***Chætura novæguineæ*.**

Chætura novæ-guineæ D'Alb. & Salvad. ; Hartert, Cat. xvi. p. 487 (1892) ; Roths. & Hartert, N. Z. xx. p. 491 (1913).

a. ♂. Upper Mimika River, Feb. 1910. [*W. G.*]

b-h. ♂ ♀. Parimau, Mimika River, 13th Nov.-12th Dec. 1910. [Nos. 1509, *G. C. S.* ; 479, 573-76, 718, *C. H. B. G.*]

Iris dark brown ; bill black ; legs brown or purplish-brown.

This fine Spine-tailed Swift is new to the British Museum. All the specimens in the series listed above appear to be adult, but the shaft-stripes of the greyish-white feathers of the breast and flanks vary much in individuals ; some, such as Nos. 576 and 1509, have the streaks dark and strongly marked, while in others, Nos. 573-575, they are less

apparent; and in two, Nos. 479 and 718, they are absent. I am unable to say whether these differences are due to age.

"The New Guinea Spine-tailed Swift was quite a common species, especially along the open beds of the large rivers, where, towards evening, numbers hawked backwards and forwards close over the surface of the water. It has an extraordinarily swift flight, and, as it dashes past, offers most sporting shots, almost the only ones it is possible to get in that densely wooded country."—*C. H. B. G.*

****Chætura caudacuta*.**

Chætura caudacuta (Lath.); Hartert, Cat. xvi. p. 472 (1892); Roths. & Hartert, N. Z. xx. p. 491 (1913).

The Needle-tailed Swift was procured on the Utakwa and Setakwa Rivers, at elevations of from 3000–5000 ft.

***Macropteryx mystacea*.**

Macropteryx mystacea (Lesson); Hartert, Cat. xvi. p. 516 (1892); van Oort, p. 82 (1909); Ogilvie-Grant, P. & P. p. 283 (1912); id. Ibis, 1913, p. 95; Roths. & Hartert, N. Z. xx. p. 491 (1913).

a, b. ♂ ♀. Iwaka River, 21st & 27th Jan. 1911. [Nos. 897, 927, *C. H. B. G.*]

c. ♀. Launch Camp, 7th Feb. 1912. [*C. B. K.*]

Iris dark brown; bill sooty-black; feet dark purplish-brown.

The wing-measurements in these three examples are ♂ 225, ♀ 226, & ♀ 235 mm.

"I only observed the Moustached Swift in the mountains, where quite a number were met with; but as they perched on the topmost branches of some very tall dead trees, only two were procured. They have an exceedingly graceful and striking flight, and utter a pretty warbling song. Mr. Goodfellow tells me he saw a smaller species of this Swift on the coast in September, but he could not secure specimens."—*C. H. B. G.*

Family CAPRIMULGIDÆ.

Caprimulgus macrurus.

Caprimulgus macrurus Hartert, Cat. xvi. p. 537 (1892); van Oort, p. 81 (1909); id. Notes, xxxii. p. 81 (1910); Ogilvie-Grant, P. & P. p. 284 (1912); id. Ibis, 1913, p. 95; Roths. & Hartert, N. Z. xx. p. 491 (1913).

a. ♀ imm. Mouth of the Mimika River, 3rd Dec. 1910. [No. 43, *C. H. B. G.*]

b, c. ♂ ♀. Wakatimi, Mimika River, May 1910. [*W. G.*]

d. ♂. Parimau, Mimika River, 15th Nov. 1910. [No. 1518, *G. C. S.*]

e. ♀. White Water Camp, Kaparé River, 18th Oct. 1910. [No. 330, *C. H. B. G.*]

f-k. ♂ ♀. Wataikwa River, 18th Sept.-9th Oct. 1910. [Nos. 1176, 1185, 1205, 1332, 1333, *G. C. S.*]

Iris brown; bill sooty-brown or blackish; feet light brownish-flesh-colour or pinkish-brown.

This series of the Large-tailed Nightjar does not differ in any way from typical examples from Java.

Mr. Goodfellow says that this was the common Nightjar of the Mimika district and was found along the shingly banks of the rivers. After the ground had been cleared for the base-camp at Wakatimi it was visited every evening by a number of Nightjars, which no doubt found such a large open space an admirable hunting-ground. The members of the Expedition derived great pleasure from watching their graceful evolutions.

Mr. Claude Grant found it tolerably plentiful on the large rivers, where the wide expanses of shingle afforded good hunting-grounds. It was always to be found resting on the ground or on the top of some large rock, its habits being similar to those of other Goatsuckers. It has a drumming alarm-note.

A clutch of two eggs was obtained on the Wataikwa on the 9th of October, 1910. When taken they were in an advanced stage of incubation, almost ready to hatch. The shell is rather rough and stained, and the pale lilac markings are very faint. The egg of this species is figured by Oates, Cat. of Eggs, iii. p. 68, pl. 1. fig. 8 (1903). The present specimens measure respectively 32×22 and 30×22 mm.

Lyncornis papuensis.

Lyncornis papuensis (Schleg.) ; Hartert, Cat. xvi. p. 606 (1892) ; van Oort. p. 81 (1909).

? *Eurostopodus astrolabæ*, Ramsay, P. Linn. Soc. N.S.W. viii. p. 20 (1883).

a. ♀. Wakatimi, Mimika River, 2nd March, 1911.
[No. 1066, *C. H. B. G.*]

b. ♂. Launch Camp, Setakwa River, 2nd Oct. 1912.
[*C. B. K.*]

Iris dark brown ; bill and feet dark fleshy-brown.

This rare Goatsucker was not previously represented in the National Collection. One was obtained by Dr. Lorentz on the Noord River, and in addition to that specimen Dr. van Oort tells us that there are three examples in the Leyden Museum, two males, the types of the species, from Salawatti and Sorong respectively, collected by Dr. Bernstein, and a male from Andai procured by von Rosenberg.

Ramsay's description of *E. astrolabæ* from South-east New Guinea agrees closely with our specimens, but both his examples seem to have been of a rather more pronounced rufous type. It seems probable, however, that *E. astrolabæ* is synonymous with *L. papuensis*.

"Around Wakatimi the Papuan Eared Nightjar appeared to be more numerous than *Caprimulgus macrurus*. It frequented the banks of the river and often perched on the roofs of our huts, as well as on the ground and the tops of the trees, especially on the broad fronds of the cocoa-nut palm."—*C. H. B. G.*

Family PODARGIDÆ.

Podargus papuensis.

Podargus papuensis Quoy & Gaim.; Hartert, Cat. xvi. p. 630 (1892); van Oort, p. 81 (1909); Ogilvie-Grant, P. & P. p. 284 (1912); id. Ibis, 1913, p. 96; Roths. & Hartert, N. Z. xx. p. 490 (1913).

a, b. ♂ ♀. Mouth of the Mimika River, 13th Dec. 1910 & 25th March, 1911. [Nos. 119, 1283, *C. H. B. G.*]

c. ♂. Wataikwa River, 18th Oct. 1910. [No. 1390, *G. C. S.*]

d. ♂. Iwaka River, 13th Feb. 1911. [No. 1043, *C. H. B. G.*]

Iris light reddish amber-brown, or dark orange; bill horn-colour, yellowish on the sides; feet light olive-brown or pale olive.

Females of this species of Frogmouth vary much in colour, but may, I think, always be distinguished from the males by having a reddish-buff band down each side of the back formed by the outer webs of the scapulars; in the males these bands are mostly white, more or less mottled with black.

A female (specimen *b*, from the Mimika River) has the underparts quite similar to those of the male, specimen *d*, and is an unusually light-coloured bird for a female, only the chest being suffused with brownish.

Mr. Goodfellow tells us that at some of the stopping places on the river the night was made hideous by the mournful cries of these birds, repeated again and again on every side and ending up with a sharp snap.

Mr. Claude Grant adds that very few examples of this Frogmouth were seen, and these were disturbed in the daytime from their roosting places in the large trees. They were able to see quite well in the daytime, and often when on the wing would make quite long flights before again perching.

Podargus ocellatus.

Podargus ocellatus Quoy & Gaim. ; Hartert, Cat. xvi. p. 6 (1892); van Oort, p. 82 (1902); Roths. & Hartert, N. Z. xx. p. 490 (1913).

a, b. ♂ ♀. Upper Mimika River, 15th Feb. & 1st May, 1910. [Nos. 1060, 1145, *G. C. S.*]

c. ♂. Wataikwa River, 24th Sept. 1910. [No. 1237, *G. C. S.*]

d. ♀. Launch Camp, Setakwa River, 27th Oct. 1912. [*C. B. K.*]

e. ♀. Canoe Camp, Setakwa River, 29th Dec. 1912. [*C. B. K.*]

Iris deep amber-yellow or bright brown; bill pale brown; feet buff or pale brown.

A male in the flesh measured 381 mm. (=15 inches); a female measured 344 mm. (=13·5 inches).

In all five specimens listed above the upperparts are nearly uniform reddish-brown, sparingly spotted with black on the scapulars, with practically no light markings except on the wing-coverts. The more uniform-backed specimens are found both in the Arfak Peninsula and in South-east New Guinea, and seem to have no geographical significance, being found everywhere in company with more mottled examples. Males seem to have more white on the underparts than females.

***Ægotheles wallacei*.**

Ægotheles wallacei Gray; Hartert, Cat. xvi. p. 650 (1892); Roths. & Hartert, N. Z. x. p. 201 (1903); xx. p. 490 (1913).

a. ♀. Wataikwa River, 31st Oct. 1910. [No. 1463, *G. C. S.*]

This specimen agrees in most particulars with the type-specimen of *Æ. wallacei*, a female procured by Wallace at Dorei; but the Wataikwa bird has the belly and under tail-coverts white, the latter being sparingly marked with black; whereas in the type these parts are thickly mottled

and vermiculated with blackish. A similarly mottled specimen procured by Dr. Guillemard in Arfak, was figured by Sharpe in Gould's 'Birds of New Guinea,' iv. pl. 39 (1886).

It is still uncertain if this Goatsucker occurs in the Aru Islands or is represented there by a distinct form, *Æ. brachyurus* (Schleg.). The female procured by the 'Challenger' Expedition at Wanoembai is smaller, with a wing measuring 113 mm. as compared with 123 mm. in the type-specimen of *Æ. wallacei*, and 124 mm. in the Wataikwa specimen listed above.

Mr. Goodfellow procured a fine male specimen of *Ægotheles* at Silbattabatta in the Aru Islands, which is also no doubt referable to *Æ. brachyurus*, if it is really separable from *Æ. wallacei*. The wing of this specimen measures 117 mm. The Aru birds appear to have a somewhat shorter wing, but I can find no difference in the measurements of the tail. The characters which distinguish *Æ. wallacei* are the following:—The absence of a white band across the hind-neck, the rather large and distinct light spots on the wing-coverts, the broad pale buff or rufous band extending from the chin down the middle of the breast, and the smaller number of light bars (ten or less) across the upper surface of the middle tail-feathers, between the tips and the ends of the upper tail-coverts.

The closely allied *Æ. salvadorii* Hartert (= *Æ. rufescens* Salvad.) from South-east New Guinea, is distinguished by having a white band across the hind-neck and more bars across the tail (more than ten). *Æ. bennetti*, another allied form from the south-eastern parts of New Guinea, is distinguished by having a white band across the hind-neck, no large white spots on the wing-coverts, and no band down the middle of the throat and breast, which are finely barred with black and white.

These three species, like all the Goatsuckers, are somewhat variable in plumage, but can be readily distinguished by the above characters, which are borne out by the fine series of specimens in the Tring Museum.

The markings on the supra-orbital feathers do not seem to be of any value as a distinguishing character, for we find birds of the same species in which these feathers are either mostly buff producing a spotted appearance, as in the type-specimen of *Æ. wallacei*, or black with narrow bars of buff, as in the male procured by Mr. Goodfellow in the Aru Islands.

**Ægotheles salvadorii*.

Ægotheles salvadorii Hartert, Cat. xvi. p. 649 (1892); Roths. & Hartert, N. Z. xx. p. 490 (1913).

A male was procured on Mount Goliath.

Family BUCEROTIDÆ.

Rhytidoceros plicatus.

Rhytidoceros plicatus Forst.; Ogilvie-Grant, Cat. xvii. p. 386 (1892); id. P. & P. p. 284 (1912); id. Ibis, 1913, p. 96.

Rhyticeros plicatus van Oort, p. 80 (1909).

a, b. ♂ ♀. Upper Mimika River, 13th Feb. & 26th Aug. 1910. [Nos. 1059, *G. C. S.*; & 23, *C. H. B. G.*]

c, d. ♂ ♀. Parimau, Mimika River, 13th & 28th Sept. 1910. [Nos. 186, 275, *C. H. B. G.*]

<i>e-h.</i> ♂ ♀ et ♀ imm.	} White Water Camp, Kaparé River; 20th-31st Oct. 1910. [Nos. 339, 384, 392, 394, <i>C. H. B. G.</i>]
<i>i-m.</i> ♂ (head and neck only).	

n-q. ♂ ♀. Wataikwa River, 28th Sept.-9th Oct. 1910. [Nos. 1269, 1270, 1330, 1334, *G. C. S.*]

r-v. ♂ ♀. Launch Camp, Setakwa River, 7th Oct.-7th Nov. 1912. [*C. B. K.*]

w, x. ♂ ♀. Canoe Camp, Setakwa River, 18th & 20th Nov. 1912. [*C. B. K.*]

Male. Iris orange-red or light hazel; orbital skin blue, deeper in front of the eye; cheeks and throat bluish-white;

bill and casque whitish-horn-colour, dark reddish-brown at the base ; feet very dark brown.

Female. Iris brown ; orbital skin deep blue ; cheeks and throat bluish-white ; bill as in the male but without dark reddish-brown at the base ; feet sooty-black.

"The Wreathed Hornbill was plentiful everywhere and found to be quite good eating. It was generally observed in pairs, but dozens might sometimes be seen together in fruit-bearing trees in company with various species of pigeons. It has a heavy noisy flight and a loud raucous call, which it continually repeats. On one or two occasions pairs were observed at what were believed to be their nesting-holes, these being in similar situations to the nesting-holes of *Cacatua triton*."—*C. H. B. G.*

Family MEROPIDÆ.

Merops ornatus.

Merops ornatus Lath. ; Sharpe, Cat. xvii. p. 74 (1892) ; van Oort, p. 80 (1909) ; Ogilvie-Grant, P. & P. p. 285 (1912) ; id. Ibis, 1913, p. 96.

a-d. ♂ ♀. Wakatimi, Mimika River, 22nd Aug. 1910. [Nos. 4, 5, 6, 11, *C. H. B. G.*]

Iris bright red ; bill black ; feet purple-brown.

Mr. Goodfellow says that this Bee-eater was common in flocks along the banks of the Mimika during April and May, preying on a canary-coloured Mayfly which swarmed on the waters at that season. Previous to that date none had been met with.

Mr. Claude Grant found it was quite plentiful around Wakatimi on his arrival there in August, and later in September numbers were seen about Parimau hawking high over the jungle well out of shot. He does not recollect seeing any after September.

Family CORACIIDÆ.

Eurystomus crassirostris.

Eurystomus crassirostris Sclater ; Sharpe, Cat. xvii. p. 39 (1892); van Oort, p. 76 (1909); Roths. & Hartert. N. Z. xx. p. 490 (1913).

a. ♂. Wakatimi, Mimika River, 25th Nov. 1910. [No. 1550, *G. C. S.*]

b, c. ♀ imm. Upper Mimika, 22nd & 24th Jan. 1910. [Nos. 1006, 1009, *G. C. S.*]

d-g. ♂ ♀. Parimau, Mimika River, 10th Sept.-28th Nov. 1910. [Nos. 171, 188, 602, 603, *C. H. B. G.*]

h. ♂. White Water Camp, Kaparé River, 24th Oct. 1910. [No. 364, *C. H. B. G.*]

i. ♀. Wataikwa River, 25th Oct. 1910. [No. 1436, *G. C. S.*]

k, l. ♂. Canoe Camp, Setakwa River, 4th & 26th Nov. 1912. [*C. B. K.*]

Iris dark brown; orbital skin coral-red; bill coral-red, tip black; feet coral-red.

Young birds have the upper mandible blackish or shaded with blackish towards the base, and the back and wings brown tinged with greenish instead of blue, and the purplish-blue throat-patch incomplete.

"The Thick-billed Roller was tolerably common and usually to be seen in pairs perched on some exposed branch of a tree, whence it hawked passing insects. When perched on trees along the river-banks it not infrequently descended to devour its prey on the shingly bed. It was a shy bird and difficult to approach within shot."—*C. H. B. G.*

Eurystomus australis.

Eurystomus australis Swains. ; Sharpe, Cat. xvii. p. 36 (1892).

Eurystomus orientalis australis van Oort, p. 76 (1909).

a. ♀ imm. Mouth of the Mimika River, 22nd March, 1911. [No. 1238, *C. H. B. G.*]

b. ♂ imm. Parimàu, Mimika River, 13th Sept. 1910.
[No. 183, *C. H. B. G.*]

Iris deep brown ; bill coral-red, tip and round the nostril black ; feet dull coral-red.

"The Australian Roller was much scarcer than the last species and, except on the lower reaches of the Iwaka River, was seldom seen. It had the same actions and habits as *E. crassirostris*, but was even more wild and difficult to approach."—*C. H. B. G.*

Family ALCEDINIDÆ.

Alcyone azurea lessoni.

Alcyone lessoni Cassin ; Sharpe, Cat. xvii. p. 170 (1892).

Alcyone azurea lessoni Roths. & Hartert, N. Z. xx. p. 488 (1913).

a-c. ♂ ♀ et imm. Parimàu, Mimika River, 13th Sept., 18th & 30th Nov. 1910. [Nos. 184, 520, 621, *C. H. B. G.*]

d, e. ♂ ♀. Wataikwa River, Aug. & 9th Oct. 1910.
[*W. G.*, & No. 1335, *G. C. S.*]

f. ♀. Launch Camp, Setakwa River, 17th Oct. 1912.
[*C. B. K.*]

g, h. ♂ ♀. Canoe Camp, Setakwa River, 15th Nov. & 24th Dec. 1912. [*C. B. K.*]

Iris hazel or dark brown ; bill black, white at the tip ; feet pinkish-flesh-colour or coral-red.

The type-specimen of *A. lessoni* Cassin was obtained at Dorei, Geelvink Bay, and there can, I think, be no doubt that typical examples from that locality are indistinguishable from the series listed above.

The relationship between this form and *A. azurea* Lath. is more difficult to define. As a rule Australian birds have the lower back, rump, and upper tail-coverts *blue*, almost a deep cobalt, while in New Guinea birds these parts are nearly or quite uniform purplish-blue, like the rest of the upperparts. *A. pulchra* Gould is founded on *fully mature* examples of *A. azurea* and has no geographical significance,

being found equally in Southern Queensland and in South Australia as well as in the Northern Territory. The measurements of the bill and wing vary and do not afford distinguishing characters as has been stated [*cf.* Hartert, N. Z. vi. p. 427 (1899)]. *A. pulchra* Gould is therefore a synonym of *A. azurea*, which ranges over the greater part of Australia except the west. Mr. Mathews [*cf.* N. Z. xviii. p. 285 (1912)] recognizes no fewer than five subspecies in Australia and Tasmania, of which two are described for the first time! The only example of this Kingfisher in the British Museum from the Aru Islands, Wallace Collection, has been referred by Sharpe to *A. lessoni*. I agree with this identification, the colour of the lower back, rump, and upper tail-coverts being purplish-blue like the rest of the upperparts, the underparts deep cinnamon and the sides of the breast and flanks dark purplish-blue as in the so-named *A. pulchra*.

"Lesson's Kingfisher was a scarce bird. The few that were observed were all met with on the broad stony rivers and occurred singly, or, rarely, in pairs. They were seen either sitting on some rock where there was a back eddy, or skimming with swift flight over the surface of the water.

"The call was almost exactly like that of the European Kingfisher, and in general appearance it reminded one very much of that species."—*C. H. B. G.*

***Alcyon pusilla*.**

Alcyon pusilla (Temm.) ; Sharpe, Cat. xvii. p. 171 (1892) ; van Oort, p. 77 (1909).

a. ♀. Wakatimi, Mimika River, 21st Nov. 1910. [No. 1529, *G. C. S.*]

b. ♂. Launch Camp, Setakwa River, 23rd Oct. 1912. [*A. F. R. W.*]

Iris dark brown ; bill black ; legs pinkish-brown.

In the British Museum Collection an adult female specimen from Cape York, North Queensland, has all the purplish-blue parts of the plumage bright cobalt-blue. Sharpe has commented on the unusual colour of this specimen in the

Catalogue of Birds and remarks that "it may not be an adult bird," but it has every appearance of being fully adult, the barring on the crown and dark margins to the breast-feathers characteristic of immaturity being absent. It may be merely a variation in colour of *A. pusilla*, normally coloured purplish-blue examples of which are found in the same locality. In any case it would be unsafe to describe the bird as a new form without having more material, and I therefore refrain from giving it a name.

In the British Museum there is an adult bird from the Solomon Islands catalogued by Sharpe under *A. pusilla* as "*h.* Ad. sk. Aola, Guadalcanar. C. M. Woodford, Esq. [C]." This specimen is perhaps not quite adult, some few feathers of the chest having dusky margins, but it is certainly not referable to *A. pusilla*. It is rather a large bird, the wing (still in moult) measuring 59 mm. as compared with 55 mm. It has the blue parts of the plumage deep cobalt-blue as in *A. richardsi* Tristram, from Rendova Island, Solomons (*cf.* Ibis, 1882, p. 134, pl. iv.), but in the latter the blue on each side of the breast is united and forms a continuous pectoral band; the under tail-coverts are *white* tipped with blue, instead of blue with a little white at the base as in *A. richardsi*. In *A. pusilla* the under tail-coverts are always white.

Messrs. Rothschild and Hartert enumerate various specimens from Gizo, Choiseul, and Bougainville Islands, also in the Solomon Group, which they refer to *A. richardsi*. They state that in these the pectoral band is often incomplete. I have examined these and find that they are not typical *A. richardsi*, but belong to a distinct subspecies.

For the bird from Aola, Guadalcanar, I have proposed the name of

Alcyone richardsi aolæ.

Alcyone richardsi aolæ Ogilvie-Grant, Bull. B. O. C. xxxv. p. 13 (1914).

The type-specimen was obtained by Mr. C. M. Woodford on the 6th of December, 1888.

The bird from Bougainville I have distinguished as

***Alcyone richardsi bougainvillei*.**

Alcyone richardsi bougainvillei, Ogilvie-Grant, Bull. B. O. C. xxxv. p. 13 (1914).

It differs from *A. richardsi* in having the pectoral band more or less interrupted in the middle and all the white feathers on the upper breast edged with purplish-blue, giving the plumage of these parts a scaled appearance. As in *A. r. aolæ*, the under tail-coverts are white tipped with blue. The wing measures 55 mm., the tail 23 mm.

The young bird has the cheeks and sides of the breast black instead of blue, also the edges of the feathers of the upper breast.

***Ceyx solitaria*.**

Ceyx solitaria Temm. ; Sharpe, Cat. xvii. p. 188 (1892) ; van Oort, p. 77 (1909) ; Ogilvie-Grant, P. & P. p. 286 (1912) ; id. Ibis, 1913, p. 98 ; Roths. & Hartert, N. Z. xx. p. 488 (1913).

a-e. ♂ ♀ et ♀ imm. Upper Mimika River, 11th Feb.-2nd May, 1910. [Nos. 1044, 1066, 1089, 1134, 1147, *G. C. S.*]

f-v. ♂ ♀ et ♂ imm. Parimau, Mimika River, 26th Aug.-29th Dec. 1910. [Nos. 21, 41, 82, 101, 255, 285, 492, 493, 586, 587, 594, 734, 870, 871, 872, *C. H. B. G.* ; & 1480, *G. C. S.*]

w-i'. ♂ ♀ et imm. Wataikwa River, 19th Sept.-24th Oct. 1910. [Nos. 1192, 1200, 1240, 1243, 1244, 1259, 1273, 1284, 1393, 1398, 1399, 1427, *G. C. S.*]

k'. ♀. Iwaka River, 23rd Jan. 1911. [No. 906, *C. H. B. G.*]

l'. ♀. Launch Camp, Setakwa River, 23rd Oct. 1912. [*C. B. K.*]

m'-q'. ♂ ♀ et ♂ imm. Canoe Camp, Setakwa River, 14th Nov.-20th Dec. 1912. [*C. B. K.*]

r'. ♀. Camp 3, Utakwa River, 2500 ft., 5th Dec. 1912. [*C. B. K.*]

Adult. Iris brown; bill black; feet orange.

Young. Iris dark brown; bill black tipped with white; legs flesh-colour.

An adult specimen in the British Museum was procured by the Rev. G. Brown either on New Ireland or New Britain, but bears no particulars as to its origin (*cf.* Selater, P. Z. S. 1877, p. 105). This bird is rather larger than any example of *C. solitaria* from New Guinea: the wing measuring 59 mm. as compared with 53–54 mm., but I cannot find that it differs in any other respect.

Mr. Goodfellow notes that this species feeds greedily on a canary-coloured Mayfly which swarms on the waters of the Mimika during April and May.

“The Solitary Kingfisher was very common everywhere, usually frequenting both streams and pools in the depths of the jungle. It has the same habits, actions, flight and call as the African Sapphire-crested Kingfisher.”—*C. H. B. G.*

Syma torotoro.

Syma torotoro Lesson; Sharpe, Cat. xvii. p. 196 (1892) [part.].

Syma torotoro tentelare van Oort (nec Hartert), p. 77 (1909).

? *Syma torotoro meeki* Roths. & Hartert (nec R. & H. 1901); N. Z. xx. p. 488 (1913).

a-f. ♂ ♀. Mouth of the Mimika River, 29th Nov.–15th Dec. 1910, and 14th March, 1911. [Nos. 12, 32, 39, 54, 150, 1147, *C. H. B. G.*]

g, h. ♂ et ♀ imm. Wakatimi, Mimika River, 2nd March, 1911. [Nos. 1063, 1065, *C. H. B. G.*]

i. ♂ imm. Parimau, Mimika River, 28th Dec. 1910. [No. 856, *C. H. B. G.*]

k. ♂. Canoe Camp, Setakwa River, 10th Dec. 1912. [*C. B. K.*]

Adult. Iris brown; bill rich gamboge-yellow; feet lemon-yellow.

Young (No. 856). Iris brown; bill gamboge-yellow,

marked with black, especially along the culmen and upper mandible; feet lemon-yellow.

All the specimens listed above are typical examples of *S. torotoro* and agree in every way with birds from Dorei and adjacent parts of North-west New Guinea, but are, on the average, a trifle smaller, as will be seen from the measurements given below.

A female specimen collected by Dr. Lorentz at Sabang, Lorentz River, has been referred by Dr. van Oort to *S. t. tentelare* Hartert from the Aru Islands because the black on the crown does not reach to the base of the culmen, an interval of 8 mm. intervening. The female of the Aru bird is easily recognised by the very small black area on the middle of the crown, whereas in the present form, to which Dr. Lorentz's specimen is referable, the black covers the greater part of the crown, extending over an area of about 34×20 mm. It occasionally commences at the base of the culmen or at a distance of 8–10 mm. from it, a buff-coloured space intervening. These differences are of no importance; being found in birds procured in the same locality.

Messrs. Rothschild and Hartert have referred with doubt to *S. t. meeki*, from South-east New Guinea, three male examples procured by A. S. Meek on the Setakwa River. With the series now available from that locality, including a number of examples of both sexes, it is clear that the specimens in Tring belong to typical *S. torotoro*.

The British Museum contains three adult male examples of typical *S. t. tentelare* Hartert from the Aru Islands, but no female; there are, however, five examples in the Tring Museum.

Of *S. t. meeki* Hartert, from South-east New Guinea, the British Museum possesses typical examples of both sexes from Milne Bay, collected by A. S. Meek. These are evidently very close to the Aru race, and I doubt whether they are really separable, as the colours of both the upper- and underparts are subject to considerable individual variation, and the supposed difference in size is of no value, as will be seen from the wing-measurements given below.

Sharpe, in the Catalogue of Birds (xvii. p. 197) distinguishes *S. torotoro* from *S. flavirostris* Gould from Australia by the coloration of the bill, which he incorrectly says is "yellow with a black mark near the end of the culmen" in *S. torotoro*, while in *S. flavirostris* the bill is uniform yellow. The reverse is really the case, the Australian birds always having a black tip to the culmen. This is correctly stated and figured in the 'Monograph of the Alcedinidæ' [pp. 151–154, pls. 55 & 56 (1869)].

None of the seven specimens from New Guinea in the British Museum Collection at the time the Catalogue was written shows any trace of a black mark on the culmen, all being fully adult birds. The presence of black on the culmen in New Guinea birds denotes immaturity. A young male from Parimau (No. 856), as described above, has the culmen mostly black and has a large patch of black feathers on the middle of the crown, much the same as in the adult female.

I am unable to distinguish *S. t. flavirostris* except by the colour of the back, which is *brownish-olive*, usually without any trace of blue in it, while in *S. torotoro* the back is always distinctly greenish-blue.

In twelve male and female examples of *S. t. flavirostris* the wing-measurement varies from 74–76 mm.

Wing-measurements.

Syma torotoro. British Museum Collection.

Males.		Females.	
	mm.		mm.
Humboldt Bay. W. Goodfellow.	85	Waigiu. A. R. Wallace	80
Dorei. A. R. Wallace	80	" "	78
Arfak. "	81	Misol. von Rosenberg	82
" "	80.5	Mimika River. B. O. U. Exped...	72
" A. A. Bruijn	80	" " ..	73
Mimika River. B. O. U. Exped...	72	" " ..	75
" " ..	76	" " ..	75
" " ..	77	" " ..	76
" " ..	79		
Setakwa River. Wollaston Exped.	76.5		

Three males from the Setakwa River in the Tring Museum vary from 73–78 mm.

S. t. tentelare Hartert.

Male, Aru Islands. A. R. Wallace	76 mm.
Male. Silbattabatta, Aru. W. Goodfellow	76 mm.
Male. Wanumbai, Aru. W. Goodfellow	76 mm.

S. t. meeki Hartert.

Male. Kumusi River, S.E. New Guinea. A. S. Meek. .	74 mm.
Male. Milne Bay, S.E. New Guinea. A. S. Meek . . .	73 mm.
Female. " " "	75 mm.

"The Saw-billed Kingfisher was not a common species, though tolerably plentiful near the coast. It was usually observed in pairs and was by no means wild. In its habits and actions it resembles *Halcyon sanctus*."—C. H. B. G.

Syma megarhyncha.

Syma megarhyncha Salvad. Ann. Mus. Civ. Genov. xxxvi. p. 70 (1896) [Moroka, Owen Stanley Mts.]; Roths. & Hartert, N. Z. viii. p. 149 (1901).

Syma weiskei Reichenow, Orn. Monatsb. 1900, p. 186 [Astrolabe Mts.].

a. ♂ imm. Camp 6 c, Utakwa River, 5500 ft., 24th Feb. 1913. [C. B. K.]

b, c. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 28th Jan. 1913. [C. B. K.]

The British Museum now possesses eight examples of this highly interesting alpine form. Besides the above there are the type-specimen of *S. weiskei*, an adult female, marked as a male, from the Astrolabe Mountains, 3000 ft., and an adult male from Aroa River, 5000 ft., both obtained by E. Weiske; a male and female from the Taora District, Owen Stanley Mountains, 4000–6000 ft., collected by Mr. W. Goodfellow; and an adult female from the same range of mountains, purchased.

All adult specimens have the ridge of the culmen black, while in immature birds nearly the whole bill is black.

Mr. Goodfellow records the colours of the soft-parts as follows:—

Male. Iris brown; bill yellow with black along the culmen; feet chrome-yellow, nails black.

Immature female. Iris brown; culmen black except at the base, remainder of bill deep yellow; feet chrome-yellow, nails black.

A young male in the present collection (specimen *a*) has the feathers of the crown tipped with black producing a large, though rather indistinct, black patch.

Three adult males: wing 85, 87, 88 mm.

Three adult females: wing 85, 87, 88 mm.

Melidora macrorhina.

Melidora macrorhina (Lesson); Sharpe, Cat. xvii. p. 201 (1892); Roths. & Hartert, N. Z. xx. p. 488 (1913).

Melidora macrorrhinus van Oort, p. 78 (1909).

a, b. ♂ ♀. Upper Mimika, 12th Feb. 1910. [*W. G.*, & No. 1051, *G. C. S.*]

c-e. ♂ et ♂ ♀ imm. Parimau, Mimika River, 26th & 29th Nov., 29th Dec. 1910. [Nos. 579, 609, 867, *C. H. B. G.*]

f-i. ♂ ♀ imm. Wataikwa River, 19th–30th Sept. 1910. [Nos. 1190, 1202, 1230, 1278, *G. C. S.*]

k. ♀ imm. Iwaka River, 20th Jan. 1911. [No. 896, *C. H. B. G.*]

l-q. ♂ ♀ et imm. Launch Camp, Setakwa River, 5th–23rd Oct. 1912 & 30th March, 1913. [*C. B. K.*]

r, s. ♂ ♀. Canoe Camp, Setakwa River, 28th Oct. & 17th Dec. 1912. [*C. B. K.*]

t. ♀ imm. Camp 3, Utakwa River, 2500 ft., 19th Dec. 1912. [*C. B. K.*]

Adult male and female. Iris sienna or hazel; upper mandible black, lower pale green or yellowish-grey, with the cutting-edges yellow; feet pale olive-green or dull yellowish-green.

In an adult female the total length in the flesh is 279 mm. (=11 inches).

In some specimens in the above series the characteristic white band across the hind-neck is not apparent, but this is due to the way the skins have been made up.

In younger birds this nuchal band is rufous-buff, as are also the feathers of the chin, throat, breast, and sides of the body.

"The Hook-billed Kingfisher was not uncommon, and was usually to be found among the lower branches and undergrowth within a few feet of the ground. On being disturbed it merely flew to some more conspicuous perch, alternately raising and lowering the crest, uttering at the same time a cry like 'chao chao.'"—*C. H. B. G.*

****Clytoceyx rex imperator*.**

Clytoceyx rex imperator van Oort, p. 79 (1909); Roths. & Hartert, N. Z. xx. p. 488 (1913).

This is a larger subspecies of *C. rex* Sharpe. A male was obtained on the Noord River.

***Dacelo leachii intermedia*.**

Dacelo intermedia Salvad.; Sharpe, Cat. xvii. p. 208 (1892).

Dacelo leachii intermedius van Oort, p. 79 (1909).

a, b. ♀ et ♂ imm. Mouth of the Mimika River, 14th & 15th March, 1911. [No. 1156, 1163, *C. H. B. G.*]

c. ♂. Wakatimi, Mimika River, 24th Dec. 1910. [No. 174, *C. H. B. G.*]

d. ♂. Lower Mimika River, Feb. 1910. [*W. G.*]

Adult. Iris pale greyish-white; upper mandible black, lower dirty whitish; feet and toes yellowish or pale olive.

The two adult males (*c* and *d*) have the back very dark sooty-brown, almost blackish-brown; the young male (*b*) has the upper tail-coverts chestnut transversely barred with black much as in the female, the tail-feathers with the basal portion blue as in the adult male, and the terminal part chestnut barred with blue and tipped with white as in the adult female. All four specimens are white on the underparts with only traces of dark fringes to some of the feathers.

"Leach's Laughing Kingfisher was tolerably common in the mangrove-swamps, but was very shy and not easily secured. Its very loud harsh cry could always be heard

resounding through the swamps, and occasionally one would be seen to leave some tree near the river-bank and dart off into the depths of the mangrovès."—*C. H. B. G.*

Sauromarptis gaudichaud.

Sauromarptis gaudichaudi (Quoy & Gaim.); Sharpe, Cat. xvii. p. 209 (1892).

Sauromarptis gaudichaud van Oort, p. 79 (1909); Ogilvie-Grant, P. & P. p. 286 (1912); id. Ibis, 1913, p. 98; Roths. & Hartert, N. Z. viii. p. 151 (1901), xx. p. 489 (1913).

Sauromarptis kubaryi Meyer; Sharpe, *t. c.* p. 211 (1892).

a-e. ♂ ♀. Wakatimi, Mimika River, 24th Dec. 1910, 1st Jan.–6th Mar. 1911. [Nos. 171, 203, 1078, 1108, *C. H. B. G.*; & 1001, *G. C. S.*]

f-k. ♂ ♀ et ♂ imm. Upper Mimika River, 12th Feb.–30th April, 1910. [*W. G.*, & Nos. 1055, 1142, *G. C. S.*]

l-v. ♂ ♀ et ♂ imm. Parimau, Mimika River, 6th Sept.–3rd Nov. 1910. [Nos. 151, 170, 178, 208, 217, 502, 544, 555, 658, 683, *C. H. B. G.*; & 1473, *G. C. S.*]

w, x. ♀ et ♀ vix ad. White Water Camp, Kaparé River, 19th & 30th Oct. 1910. [Nos. 336, 392, *C. H. B. G.*]

y. ♂. Kamura River, 30th Sept. 1910; [No. 1277, *G. C. S.*]

z-g'. ♂ ♀ et ♂ ♀ imm. Wataikwa River, 18th Sept.–14th Oct. 1910, 3rd & 4th Feb. 1911. [Nos. 1180, 1231, 1293, 1329, 1361, 1362, *G. C. S.*; & two unnumbered, *C. H. B. G.*]

h-l'. ♂ ♀ et ♂ imm. Iwaka River, 21st–31st Jan. 1911. [Nos. 898, 917, 953, 968, *C. H. B. G.*]

m'-u'. ♂ ♀ et ♂ imm. Launch Camp, Setakwa River, 2nd–30th Oct. 1912, 11th & 28th March, 1913. [*C. B. K.*]

v'. ♀. Canoe Camp, Setakwa River, 1st Nov. 1912, [*C. B. K.*]

w', x'. ♂. Camp 3, Utakwa River, 2500 ft., 2nd Dec. 1912, 13th Jan. 1913. [*C. B. K.*]

Adult. Iris dark brown; bill pale green or pale apple-green; feet pale olive.

Total length in the flesh 320–342 mm. (=12·5–13·5 ins.):

Young. Iris hazel ; upper mandible black, lower pale green.

I am unable to recognise any races of this species.

Mr. Goodfellow says that the natives brought numbers of half-fledged young of this species to the base-camp at Wakatimi during May and June. Many of these were purchased by the Javanese soldiers and convicts, but, as they were fed on boiled rice only, their lives were brief.

"Gaudichaud's Kingfisher was a common bird everywhere, and was met with throughout the jungle, both singly and in pairs. It was by no means wild, and was usually to be seen perched on some conspicuous branch about 20 ft. above the ground. Its flight was straight and tolerably swift, and its call was of two syllables, best described as 'chuk-chuk.'"—*C. H. B. G.*

Halcyon macleayi.

Halcyon macleayi Jard. & Selb. ; Sharpe, Cat. xvii. p. 254 (1892) ; van Oort, p. 77 (1909).

Halcyon macleayi publa Mathews, Austr. Av. Rec. i. p. 38 (1912).

a. ♂. Wakatimi, Mimika River, 21st Aug. 1910. [No. 1, *C. H. B. G.*]

Iris brown ; bill black, pearly whitish at the base of the lower mandible ; feet sooty-black.

The wing measures 88 mm., and is rather smaller than that of most Australian examples, but two specimens collected by F. Strange in Queensland measure respectively 88 and 89 mm. On the other hand, a bird from South-east New Guinea measures 93 mm. and others from Fergusson Island are equally large. In one Queensland bird the wing measures 96 mm.

Mr. Mathews distinguishes four subspecies of *H. macleayi* in Australia, but even with the help of his series I fail to recognise more than one [*cf.* List Birds Austr. p. 148 (1913)]. The type-specimen of his *H. m. distinguendus* from South Alligator River, which he has kindly sent me for examination, certainly has the back and scapulars unusually blue,

but other examples from North Australia (Port Darwin and Port Essington) do not differ from typical *H. macleayi*. The differences in colour are probably entirely due to wear, the back and scapulars being bluer in freshly moulted birds and becoming more or less verditer-green as the plumage becomes worn.

***Halcyon nigrocyaneus*.**

Halcyon nigrocyaneus Wallace, P. Z. S. 1862, p. 165, pl. xix. ; Sharpe, Cat. xvii. p. 256 (1892) ; Roths. & Hartert, N. Z. viii. p. 154 (1901) ; Ogilvie-Grant, P. & P. p. 286 (1912) ; id. Ibis, 1913, p. 97.

a. ♂. Wakatimi, Mimika River, 3rd March, 1911. [No. 1096, *C.H.B.G.*]

Iris dark brown ; bill black, white on the underside of the lower mandible ; feet and toes clear ash-colour.

Wallace's description is founded on an adult female. The type, which is in the British Museum, differs from the male in having the breast and belly white ; in the latter the underparts are rich purplish-blue with a broad white band across the lower breast. In the adult male from Wakatimi, the greater part of the belly as well as the sides of the body and flanks are black ; in this respect it resembles a male from the Gould Collection (listed as specimen *b* in the 'Catalogue of Birds') and probably from the Arfak, as it was no doubt procured by A. B. Meyer's collectors.

There is a similar black-bellied male specimen in the Tring Museum from Etna Bay, obtained by Cayley Webster.

In an adult male from Sorong (specimen *d* of the 'Catalogue'), the sides of the body, flanks, and almost the entire belly are purplish-blue like the breast ; there are three similar specimens in the Tring Museum from Jobi Island and Arfak. This difference in the colour of the belly is no doubt individual, and possibly caused by age.

It has been suggested by Messrs. Rothschild and Hartert that *Halcyon quadricolor* Oustalet (Le Nat. 1880, p. 323) is probably synonymous with the present species, but the type-specimen figured by Sharpe in Gould's 'Birds of New

Guinea,' iv. pl. 56 (1882), is clearly an adult and very different in appearance from the young of *H. nigrocyaneus*, though the latter has the underparts suffused with dull chestnut. This error has recently been corrected [*cf.* Bull. B. O. C. xxxv. p. 33 (1914)].

In the Tring Museum there are at the present time two adult males of *H. quadricolor* from North-east New Guinea which exactly resemble Gould's figure. These are without doubt perfectly adult birds, and represent a very distinct species. The female of this species, according to Berlepsch (J. f. O. 1897, p. 90), can scarcely be distinguished from the female of *H. nigrocyaneus*; the only specimen known at present is in his collection.

***Halcyon sordidus*.**

Halcyon sordidus Gould ; Sharpe, Cat. xvii. p. 278 (1892); Roths. & Hartert, N. Z. viii. p. 155 (1901).

Halcyon sordidus melvillensis Mathews, Austr. Av. Rec. i. p. 38 (1912).

a-c. ♂ ♀. Mouth of the Mimika River, 8th & 13th Dec. 1910. [Nos. 67, 69, 139, *C. H. B. G.*]

As might be expected, New Guinea examples of *H. sordidus* belong to the larger race of this species, which ranges from the Aru Islands to the Monte Bello Islands, Melville Island, North Australia, and Queensland. It was previously unknown from New Guinea.

In the birds from the Mimika River the wing-measurements are respectively :—a. ♂ 110 ; b. ♂ 107 ; c. ♀ 104 mm.

Dr. Hartert records a specimen from Dobbo, Aru Islands, with a wing-measurement of 116 mm. ; while in the British Museum Collection the largest examples are from the Hope Islands, off Cape Tribulation, East Queensland—a male and female collected there by Macgillivray measuring respectively 112 and 115 mm.

In some specimens, however, the wing-measurement is much smaller, and two from the Aru Islands measure

103 mm. The average measurement of sixteen specimens is 106 mm.

The small race, which has been named *H. s. colonus* Hartert, inhabits the Louisiade Archipelago. In seven specimens the wing-measurement varies from 86 to 93 mm., the average being 91.5 mm.

Halcyon sanctus.

Halcyon sanctus Vig. & Horsf. ; Sharpe, Cat. xvii. p. 267 (1892) ; van Oort, p. 77 (1909) ; Ogilvie-Grant, P. & P. p. 285 (1912) ; id. Ibis, 1913, p. 97 ; Roths. & Hartert, N. Z. xx. p. 489 (1913).

a-d. ♀ et ♂ ♀ imm. Mouth of the Mimika River, 19th–24th March, 1911. [Nos. 1199, 1213, 1236, 1276, *C. H. B. G.*]

e. ♀ imm. Mimika River, 15th April, 1910. [No. 1131, *G. C. S.*]

f, g. ♂ et ♀ imm. Parimau, Mimika River, 31st Aug. & 3rd Nov. 1910. [No. 60, *C. H. B. G.* ; & 1474, *G. C. S.*]

h. ♀. Tuaba River, 19th May, 1910. [No. 1161, *G. C. S.*]

i-l. ♂ et ♂ imm. Launch Camp, Setakwa River, 15th & 18th Oct. 1912. [*C. B. K.*]

Iris brown ; bill black, base of the lower mandible whitish-horn-colour ; feet sooty-brown or fleshy-brown.

The youngest examples, such as specimens *c* and *d* in the above series, have the collar round the hind-neck white and all the wing-coverts edged with pale sandy. The dusky bars on the hind-neck and under surface seem to be a very variable character, and are almost wanting in some younger individuals, in which all the wing-coverts are still edged with pale sandy. In some younger birds the breast and belly are washed with bright buff, in others these parts are only slightly tinged with buff.

Mr. Mathews recognises four subspecies in Australia !

Mr. Goodfellow tells us that this Kingfisher was undoubtedly the most conspicuous bird about the base-camp at Wakatimi, where its harsh cry could be heard all through the

hot hours of the day. The huts and store-houses were infested by myriads of black crickets, which take the place of cockroaches found in other countries and commit fearful havoc among stores and personal possessions. The constant packing up of goods to send up the river drove thousands of these insects to seek shelter in other parts of the camp, and, at such times, Kingfishers became very tame and darted in and out among the buildings, taking advantage of the feast thus afforded.

“The Sacred Kingfisher was not a common species inland, but was quite plentiful on the coast, where it was usually seen singly or in pairs sitting on the dead trees or making with a swift straight flight for the shelter of the mangroves.”—*C. H. B. G.*

Tanysiptera sylvia.

Tanysiptera sylvia Gould ; Sharpe, Cat. xvii. p. 300 (1892) ; Roths. & Hartert, N. Z. viii. p. 157 (1901).

Tanysiptera sylvia salvadoriana Ramsay ; van Oort, p. 78 (1909).

a. ♂ imm. Launch Camp, Setakwa River, 5th Nov. 1912. [*C. B. K.*]

This immature male seems to agree in all particulars with examples of *T. sylvia* of a similar age from North-east Australia. I have also compared it with the type-specimens collected by Macgillivray at Cape York, and after making due allowance for differences of age, it agrees perfectly with these.

Dr. van Oort records an immature female from Sabang, on the Lorentz River, as undoubtedly referable to *T. s. salvadoriana* Ramsay. This is the form found in South-east New Guinea with a lighter blue crown and back and paler buff underparts.

T. sylvia was believed to be confined to North-east Australia, and its presence on the Setakwa River is difficult to explain. It is not known to occur in the Aru Islands, where *T. hydrocharis* Gray is found. The list of specimens of *T. sylvia* given in the British Museum Catalogue includes

a number of birds collected by Cockerell and Thorpe, and all labelled as having come from Cape York. It is notorious that many specimens procured by these collectors and marked Cape York really came from the Aru Islands. In the present instance, however, there can be no reason to believe that any mistake has been made about the locality.

In the British Museum there is an adult from the Owen Stanley Mountains, presented by Capt. F. R. Barton, which is intermediate between *T. sylvia* and *T. s. salvadoriana*; it has the crown and wing-coverts purplish almost as in *T. sylvia*, while the underparts are pale buff as in *T. s. salvadoriana*. There are similar, more or less intermediate examples from South-east New Guinea in the Tring Museum.

Family LORIIDÆ.

Chalcopsittacus scintillatus.

Chalcopsittacus scintillatus (Temm.) ; Salvad. Cat. xx. p. 16 (1891) ; Mivart, Monogr. Loriidæ, p. 13, pl. iv. figs. 1 & 3 (1896) ; Roths. & Hartert, N. Z. xx. p. 483 (1913).

Chalcopsitta scintillatus van Oort, p. 73 (1909).

a-h. ♂ ♀ et ♂ imm. Wakatimi, Mimika River, 28th Dec. 1910 & 1st Jan.-7th March, 1911. [Nos. 196, 198, 200, 206, 1060, 1085, 1088, 1116, *C. H. B. G.*]

i. ♂. Upper Mimika River, Feb. 1910. [*W. G.*]

k-p. ♂ ♀. Parimau, Mimika River, 24th Nov.-24th Dec. 1910. [Nos. 562, 623, 626, 652, 675, 818, *C. H. B. G.*]

q. ♂. Wataikwa River, 25th Oct. 1910. [No. 1484, *G. C. S.*]

r-y. ♂ ♀ et ♂ imm. Launch Camp, Setakwa River, 9th Oct.-4th Nov. 1912. [*C. B. K.*]

z-v. ♂ ♀. Canoe Camp, Setakwa River, 27th Oct. & 6th Nov. 1912. [*C. B. K.*]

Iris : inner ring pale yellow, middle ring black, outer ring hazel ; bill, orbits, throat, and feet black.

The whole series detailed above are typical examples of *C. scintillatus*, which was described from specimens taken by S. Müller at Lobo, Triton Bay, South-west New Guinea.

They have the under wing-coverts scarlet. Mr. Rothschild and Dr. Hartert record a young specimen of *C. scintillatus* obtained by A. S. Meek on the Upper Setakwa River, while from the Island River they record *C. s. chloropterus* obtained by the same collector. On the Noord River, which occupies an intermediate position between the two rivers mentioned above, Dr. Lorentz collected a series of birds which Dr. van Oort informs us are partly referable to typical *C. scintillatus* and partly to *C. s. chloropterus*, while some are intermediate. This is very interesting, as it is evident that the two forms overlap at this point.

C. scintillatus, like many other Parrots, presents considerable individual variability in plumage ; there is no variation met with among males which cannot be found among females also.

The principal points of variation are :—

1. The yellow area on the basal half of the inner web of the primaries, which normally covers the outer half of the web, may be much reduced and paler in colour, showing an approach to the eastern *C. s. chloropterus*. In some examples of the latter subspecies the yellow is vestigial.
2. The axillary plumes may be scarlet, or scarlet with a median shaft-stripe of green, or even green with red margins.
3. The yellow shaft-streaks of the mantle and underparts also show great variation ; in some examples they are yellow, in others those on the mantle and belly are green and the yellow streaks are mostly confined to the breast. In one young male the feathers of both the mantle and breast are streaked with orange-red ; while in a second example the streaks on the mantle are green and those on the chest orange-red, the feathers being tipped with the same colour.

The young males have the head brownish-black tinged with purplish (not chestnut, as stated by Count Salvadori in

the 'Catalogue of Birds'), and only traces of red on the sides of the forehead.

Birds from the Aru Islands have been separated by G. R. Gray as *Eos rubrifrons* (type in the British Museum).

There can be no doubt that, as a whole, the Aru Island birds have the shaft-streaks on the breast wider and more orange in colour, while those on the rest of the underparts are yellower and more extended. The difference between New Guinea birds and Aru Island birds is tolerably well marked in the series of skins before me. The amount of red on the forehead is variable: the type of *E. rubrifrons* and one specimen collected by Mr. Goodfellow at Silbatta-batta, Aru, being exceptional in this respect. If the Aru bird is kept separate it should stand as *C. s. rubrifrons* (Gray).

This is the form figured by Mivart (*op. cit.*).

"The Yellow-streaked Lory was a common species and met with in large flocks or in pairs. It was rather heavier in its movements than the other species of Lory, but its flight was equally swift and straight."—*C. H. B. G.*

****Chalcopsittacus scintillatus chloropterus*.**

Chalcopsittacus chloropterus Salvad.; id. Cat. xx. p. 17 (1891).

Chalcopsitta scintillatus chloropterus van Oort, p. 73 (1903).

For remarks on this form, see above under *C. scintillatus*.

***Eos fuscata*.**

Eos fuscata Blyth; Salvad. Cat. xx. p. 30 (1891); Mivart, Monogr. Loriidæ, p. 41, pl. xv. (1896); van Oort, p. 73 (1909); Roths. & Hartert, N. Z. viii. p. 65 (1901), xx. p. 483 (1913).

a, b. ♂ ♀. Wakatimi, Mimika River, 2nd March, 1911. [Nos. 1061, 1068, *C. H. B. G.*]

c-f. ♂ ♀. Lower Mimika River, 7th March & Aug. 1910. [*W. G.*, & No. 1092, *G. C. S.*]

g-n. ♂ ♀. Iwaka River, 7th-13th Feb. 1911. [Nos. 1011, 1017, 1037, 1088, *C. H. B. G.*]

o. ♀. Canoe Camp, Setakwa River, 6th Nov. 1912.
[C. B. K.]

p-r. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 29th Nov.
& 27th Dec. 1912, 9th Jan. 1913. [C. B. K.]

s, t. ♂ ♀. Camp 6 c, Utakwa River, 5500 ft., 19th Feb.
1913. [C. B. K.]

u-w. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 28th Jan.
1913. [C. B. K.]

Iris orange or rich orange; orbital skin black; bill scarlet
or coral-red, bare skin on the throat orange; feet black.

Almost the whole of the series listed above belong to the
red phase; two specimens only, one male from Wakatimi
(No. 1061) and one female from Camp 9 on the Utakwa
River, 5500 ft., have the upper pectoral band orange or
orange-yellow and the red on the rest of the underparts
mingled with orange. They are somewhat intermediate
between the red and yellow phases. Messrs. Rothschild
and Hartert state that six specimens collected by Meek on
the Setakwa and Utakwa Rivers all belong to the red
phase; while among nine birds obtained by the same col-
lector on Mount Goliath six are red, two yellow, and one
intermediate. Dr. van Oort records a red example procured
by Dr. Lorentz in the Hellwig Mountains.

Count Salvadori in the 'Catalogue of Birds' says that the
yellow birds are the young, but Mivart felt uncertain as to
the correctness of this conclusion. I may add that, with the
large series now before me, I feel certain that the birds with
the feathers of the pectoral bands and lower breast and belly
pure rich yellow are perfectly adult and represent a yellow
phase of plumage. This is the conclusion already arrived at
by Mr. Rothschild and Dr. Hartert.

Young birds are to be found in both the red and yellow
phases of plumage, and occur together in the same locality;
for instance, Mr. Goodfellow collected four young birds at
Sogeri, in the Owen Stanley Mountains, which vary from
red to yellow.

Young birds in first plumage may be recognised by the
small bill with the upper mandible dusky and the lower

partly so. The pectoral bands are much less distinct than in the adult, and the underparts generally are *barred* across, the dark feathers of the chest and upper breast being tipped with yellowish, while those of the pectoral bands, lower breast, and belly are yellow tipped with red. The under tail-coverts also are brownish-black edged with dull yellowish-olive—in the adult they are purple,—and the tail-feathers are sharp-pointed.

Mr. Goodfellow says the Dusky Lory roosted in thousands behind the Camp at Wakatimi. Long before sunset and until it was quite dusk flocks of many hundreds, coming from all directions, flew over with a deafening noise. Often some weak branch would give way under their weight, causing a panic just as the noise was beginning to subside, and clouds of these birds would again circle around, seeking a fresh roosting-place and keeping up a continual din.

Mr. Claude Grant tells us it is a common species everywhere and was observed in large flocks, especially towards sundown, when numbers passed overhead going to roost. It is a very tame bird and seldom takes to flight, even when fired at. In March many were brought to Wakatimi by natives from the mouth of the Kamura River, and though numbers were secured by him or by the Dutch soldiers they were so exhausted and starved that the majority died. How the natives caught them he was unable to discover; there was no sign of bird-lime on any of those examined. Mr. Grant brought back a number alive.

Lorius erythrothorax.

Lorius erythrothorax Salvad.; id. Cat. xx. p. 35 (1891); Mivart, Monogr. Loriidæ, p. 51, pl. xvii. fig. 2 (1896); Ogilvie-Grant, P. & P. p. 288 (1912); id. Ibis, 1913, p. 99.

Lorius lory erythrothorax van Oort, p. 74 (1909); Roths. & Hartert, N. Z. xx. p. 484 (1913).

a, b. ♂ ♀ imm. Wakatimi, Mimika River, 4th May, 1911. [Nos. 1081, 1083, *C. H. B. G.*]

c-g. ♂ ♀. Mimika River, 3rd & 11th Feb. and 30th March, 1910. [Nos. 1019, 1021, 1048, 1049, 1111, *G. C. S.*]

h-o. ♂ ♀ et ♂ ♀ imm. Parimau, Mimika River, 30th & 31st Aug. and 10th & 27th Nov. 1910. [Nos. 53, 54, 55, 56, 70, 706, 802, *C. H. B. G.*]

p-s. ♂ ♀. White Water Camp, Kaparé River, 10th & 26th Oct. and 4th & 7th Nov. 1910. [Nos. 300, 377, 439, 451, *C. H. B. G.*]

t-z. ♂ ♀. Wataikwa River, 18th Sept.-28th Oct, 1910. [Nos. 1183, 1214, 1224, 1260, 1261, 1309, 1452, *G. C. S.*]

a'. ♀. Iwaka River, 26th Jan. 1911. [No. 923, *C. H. B. G.*]

b'-h'. ♂ ♀. Launch Camp, Setakwa River, 3rd Oct.-7th Nov. 1912. [*A. F. R. W. & C. B. K.*]

i'-o'. ♂ ♀. Canoe Camp, Setakwa River, 10th-24th Nov. & 5th Dec. 1912. [*C. B. K.*]

p'-u'. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 23rd Nov. 1912. [*C. B. K.*].

Iris yellow; bill deep salmon-red, tip yellowish; feet black.

Total length in the flesh: male 312 mm. (=12.25 inches); female 292 mm. (=11.5 inches).

Occasionally the young of the Red-breasted Lory has a somewhat irregular purplish-black band across the fore-neck; the lesser under wing-coverts are usually green, but sometimes blue along the border of the wing, and the inner coverts are deep purplish-blue mottled with red and green; the greater series is yellow at the base and greyish-black at the tip, forming a double band across the under surface of the wing. One immature bird (No. 1081) is very remarkable in having the feathers of the mantle yellow or red or a mixture of both at the base and the margins purplish-blue; a second specimen (No. 56) has the upper mantle crimson-scarlet with just a trace of purple among the feathers on the left side. I am convinced, however, that both these specimens are merely individual variations. The upper tail-coverts in all the young I have examined are scarlet mixed with green and blue, whereas in the adult they are uniform scarlet.

The British Museum now possesses an apparently adult example of *L. salvadorii* Meyer, procured by Mr. Walter Goodfellow at Sorong, North-west New Guinea. The bird seems to agree perfectly with the description and figure of *L. salvadorii* given by Mivart (*op. cit.* p. 57, pl. xix.), who figured one of the typical specimens in the Dresden Museum, procured at Astrolabe Bay, North-east New Guinea. This bird is said to differ from *Lorius jobiensis* Meyer, from the islands of Jobi and Miosnom, in Geelvink Bay, in being blacker on the nape and belly, but we have no examples of the latter for comparison.

The Sorong bird has a wing-measurement of 157 mm. (=6·2 ins.): this agrees exactly with the measurement of the type-specimen, as given by Meyer. In *L. jobiensis* the wing-measurement is 170–180 mm. (=6·68–7·07 ins.). *L. rubiensis* Meyer, from Rubi, is an allied form, but it is easily distinguished from both *L. salvadorii* and *L. jobiensis* by having the lesser and median under wing-coverts red instead of dark blue. If my identification of our specimen is correct, *L. salvadorii* must range along the north of New Guinea from Astrolabe Bay, westwards to Sorong. *L. salvadorii* is easily distinguished from the allied *L. lory* and *L. erythrothorax* by having the purplish-black on the lower breast continued across the sides of the body to the under wing-coverts in a wide band, which separates the scarlet flanks from the similarly coloured upper breast; it also has the lesser and median under wing-coverts blue instead of scarlet and the greater under wing-coverts yellow and black in the adult, as in younger examples of *L. lory* and *L. erythrothorax*. In the adult of both the last-named species the greater under wing-coverts are scarlet, like the lesser and median coverts.

“The Red-breasted Lory is one of the commonest species, especially near the coast. Large flocks frequently passed overhead or were seen in the trees, and if one was shot the remainder seldom took flight. Numbers were kept at the camps by the soldiers and became very tame.”—*C. H. B. G.*

Trichoglossus cyanogrammus.

Trichoglossus cyanogrammus Wagler; Salvad. Cat. xx. p. 52 (1891); Mivart, Monogr. Loriidæ, p. 95, pl. xxx. fig. 1 (1896).

Trichoglossus hæmatodus cyanogrammus van Oort, p. 75 (1909); Roths. & Hartert, N. Z. xx. p. 484 (1913).

a-c. ♂ ♀ et ♀ imm. Mouth of the Mimika River, 8th Dec. 1910, 15th & 18th March, 1911. [Nos. 80, 1172, 1191, *C. H. B. G.*]

d-g. ♂ ♀. Wakatimi, Mimika River, 24th Dec. 1910. [Nos. 169, 175, 179, 182, *C. H. B. G.*]

h. ♀. Upper Mimika River, May 1910. [*W. G.*]

i-o. ♂ ♀. Parimau, Mimika River, 3rd-30th Dec. 1910. [Nos. 647, 648, 678, 679, 715, 880, *C. H. B. G.*]

p-y. ♂ ♀. Wataikwa River, 22nd Sept.-25th Oct. 1910 & 9th Feb. 1911. [Nos. 1222, 1248, 1340, 1341, 1342, 1344, 1363, 1437, 1438, *G. C. S. & C. H. B. G.*]

z-h'. ♂ ♀. Launch Camp, Setakwa River, 2nd Oct.-4th Nov. 1912. [*C. B. K.*]

i'-l'. ♂ et ♂ imm. Canoe Camp, Setakwa, 20th Nov. & 30th Dec. 1912. [*C. B. K.*]

Adult male and female. Iris, inner ring dull white or yellowish, middle ring black, outer ring reddish-brown; bill bright red, tip yellowish; cere black; feet olive-green, olive-plumbeous, or blackish.

Young. Iris dull olive-grey, eyelid black; bill yellow; feet pale ash-colour.

Some specimens, both male and female, but especially the most adult males, have the lower breast and sometimes the upper part of the belly mostly lamp-black, like the throat. The dark colour, however, never invades the flanks, as is the case in *T. c. brooki*, which I described from the Pulo Swangi (Spirit Island), off the coast of Terangan, Aru Islands [*cf.* Bull. B. O. C. xix. p. 102 (1907)].

According to Dr. van Oort, *T. cyanogrammus* is found as far east as the Noord River, while the same author refers specimens from Merauke to *T. c. nigrogularis* Gray.

T. c. nigrogularis, of which the British Museum possesses the type from the Aru Islands and a fine series recently collected by Mr. W. Goodfellow, ranges to the Kei Islands, and thence eastwards across Southern New Guinea to the Fly River. It has the general colour of the breast more orange-scarlet and the bands, formed by the dark edges of the feathers, very narrow; in *T. cyanogrammus* the general colour of the breast is of a more pinkish-scarlet and the bands are wider. In both these forms, *T. cyanogrammus* and *T. c. nigrogularis*, the ear-coverts are blue, while in *T. c. massena*, inhabiting South-east New Guinea and other islands eastwards to the New Hebrides, the ear-coverts are dark green or distinctly washed with that colour, and the nape is maroon, a very distinctive character. In other respects *T. c. massena* resembles *T. c. nigrogularis*, having the breast orange-red and the bands narrower. I cannot see what reasons the authors quoted above can have had for regarding *T. cyanogrammus* as a subspecies of *T. hæmatodus*, which represents quite another section of the genus *Trichoglossus*.

The very remarkable specimen procured by Wallace in the Aru Islands, and described as *T. coccineifrons* by G. R. Gray, is perhaps a hybrid, as Count Salvadori has suggested, but not between *T. nigrogularis* and *Chalcopsittacus scintillatus*. The latter is a very different bird in every respect, and its only point of resemblance with *T. coccineifrons* is its crimson-red forehead. It may possibly be a mere colour-variation of *T. c. nigrogularis*, as has been suggested by Finsch, and it is evidently an immature bird as stated by him. *T. coccineifrons* is well figured by Mivart [Monogr. Loriidæ, p. 101, pl. xxxi. fig. 2 (1896)].

“The Green-naped Lory was common around Wakatimi and was met with on the coast in small flocks, but was not very plentiful around Parimau or in the mountains. It is a very active bird and has a swift flight. Its call-note is a single short sharp note, and when handled or wounded it gives vent to the usual harsh Parrot-like scream.”—*C. H. B. G.*

***Trichoglossus cyanogrammus nigrogularis.**

Trichoglossus nigrogularis Gray ; Salvad. Cat. xx. p. 55 (1891).

Trichoglossus hæmatodus nigrogularis van Oort, p. 74 (1909).

Specimens procured at Merauke are said to be rather smaller than typical specimens from the Aru Islands in the Leyden Museum.

Glossopsittacus goldiei.

Glossopsittacus goldiei Sharpe ; Salvad. Cat. xx. p. 68 (1891) ; Mivart, Monogr. Loriidæ, p. 139, pl. xlv. fig. 1 (1896) ; Roths. & Hartert, N. Z. xx. p. 484 (1913).

a. ♂. Iwaka River, 31st Jan. 1911. [No. 965, C. H. B. G.]

Iris deep brown ; bill black ; feet pale ash-colour.

Goldie's Lory was described from the Astrolabe Mountains ; the British Museum possesses the type, an immature bird, and an adult from the same locality. The specimen in the present collection is rather larger and the underparts are of a rather yellower-green tint ; but a comparison with six specimens from Mount Goliath in the Tring Museum shows this difference to be of no importance.

	Wing. mm.	Tail. mm.	
1 adult. Astrolabe Mts.	108	80	
1 immature. " " (Type.)	104	71	
1 ♂ adult. Iwaka River	110	85	
4 ♂ adult. Goliath Mountains	106, 106, 109, 111	80, 82, 83, & 1 imperfect	} Tring Museum.
2 ♀ adult, " "	101, 102	74, 68	

Hypocharmosyna wilhelminæ.

Hypocharmosyna wilhelminæ (Meyer) ; Salvad. Cat. xx. p. 73 (1891) ; Mivart, Monogr. Loriidæ, p. 149, pl. xlvii. (1896).

a. ♂ imm. Iwaka River, 28th Jan. 1911. [No. 941, C. H. B. G.]

Iris very pale yellow ; bill pale horn-colour, tip black ; feet livid flesh-colour.

The range of Wilhelmina's Lory is given by Count Salvadori as "New Guinea from Andai on the western coast of Geelvink Bay to the Astrolabe Mountains in the south-eastern part." Its discovery on the Iwaka River probably indicates the extent of its western range in the south.

Hypocharmosyna placensis.

Hypocharmosyna placens (Temm.); Salvad. Cat. xx. p. 74 (1891); Mivart, Monogr. Loriidæ, p. 151, pl. xlviii. (1896).

Hypocharmosyna placensis van Oort, p. 75 (1909).

a-c. ♂ ♀ et ♀ imm. Mouth of the Mimika River, 14th Dec. 1910. [Nos. 135, 136, 137, *C. H. B. G.*]

d-m. ♂ ♀ et ♀ imm. Wakatimi, Mimika River, 1st-4th March, 1911. [Nos. 1054, 1055, 1070-1075, 1086, *C. H. B. G.*]

Adult male and female. Iris pale yellow; bill cherry-red; orbits olive; feet dull coral-red.

Immature female. Iris pale yellow; bill much duller than in the adult; feet light brown.

The specimens numbered 137, 1054, and 1074 are clearly immature birds, and in all three the sex is marked as female. All three have a number of small red feathers in front of the eye which would lead one to suppose that they were young males. In the adult female the feathers in front of the eye are green with narrow yellow shaft-streaks, and there is never any trace of red.

"This pretty little Lory was only seen around Wakatimi. It came in numbers to certain flowering trees, where the specimens were secured. It was a tame bird, and several might be shot before the flocks took alarm and left the tree."—*C. H. B. G.*

Charmosynopsis pulchella.

Charmosynopsis pulchella (Gray); Salvad. Cat. xx. p. 79 (1891); Mivart, Monogr. Loriidæ, p. 171, pl. lv. (1896); Roths. & Hartert, N. Z. xx. p. 484 (1913).

a-f. ♂ ♀. Iwaka River, 28th Jan. 1911. [Nos. 935, 936, 938, 939, 940, 947, *C. H. B. G.*]

g-n. ♂ ♀ et ♂ ♀ imm. Camp 9, Utakwa River, 5500 ft., 31st Jan. 1913. [C. B. K.]

Adult male and female. Iris yellow; bill gamboge, tip black; feet yellow-ochre.

Mr. E. J. Brook has had the good fortune to rear young of this species in his aviaries at Hoddam Castle, Dumfriesshire. The parents were brought some years ago by Mr. Walter Goodfellow from British New Guinea. Mr. Brook has forwarded me the following notes on the coloration of the young:—

“The young on leaving the nest resembles the parents, but has the bill brownish; the crimson colouring of the plumage less intense, and the breast and vent mixed with green. There are no yellow stripes on the breast, nor any indication of them, and the green of the back extends right up to the occiput.”

The young birds in the present collection entirely confirm these statements. At an early stage it is possible to distinguish young males and females, for, like the adult birds, they soon develop the characteristic sex-markings on the sides of the rump, the male having a crimson patch much like the rest of the underparts, but with a few yellow shaft-streaks, whereas in the female the patch is yellow tinged with green.

The figure given by Mivart somewhat exaggerates the size of the bird.

“The Fairy Lory was only found in the mountains, where numbers visited certain flowering trees on which most of the specimens were secured. Although many may be sitting in a tree, they are extremely difficult to see, especially when they remain quiet, peering down at the intruder. They have a short sharp note and are very tame.”—C. H. B. G.

Charmosynopsis multistriata. (Plate V. fig. 2.)

Charmosynopsis multistriata Roths. Bull. B. O. C. xxvii. p. 45 (1911); Ogilvie-Grant, P. & P. p. 289 (1912); id. Ibis, 1913, p. 100; Roths. & Hartert, N. Z. xx. p. 484 (1913).

a. ♀. Mimika River, Aug. 1910. [*W. G.*]

b, c. ♂ ♀. Canoe Camp, Setakwa River, 16th Dec. 1912.
[*C. B. K.*]

d. ♀. Camp 6 c, Utakwa River, 5500 ft., 21st Feb. 1913.
[*C. B. K.*]

Adult female. Iris bright red; bill yellowish-red; feet bluish slate-colour.

A month before Mr. Goodfellow obtained the first female of this fine species on the Mimika River, a male had been secured by A. S. Meek on the upper Setakwa River and sent by post to the Tring Museum.

The sexes, which appear to be quite similar in plumage, may be described as follows:—

Adult male and female. Forehead, sides of the head, and throat yellowish-green shading into green on the middle of the crown; occiput and nape brown, the feathers of the latter spotted at the tip with dull orange. Upperparts dark green with a few emerald-green shaft-streaks on the feathers of the hind-neck; quills dull black, the outer webs of the secondaries and wing-coverts green, those of the primaries edged with green; tail-feathers dusky, being brownish-white towards the tips and green at the base; underparts below the throat with pale bright greenish-yellow shaft-streaks, becoming emerald-green on the ear-coverts, sides of the neck, and flanks. Vent and bases of some of the median under tail-coverts red.

Adult male	{	Total length about	Wing 97-100.	Tail 104.
Adult female		190 mm.	„ 94-97.	„ 92.

The bird figured is a ♀ specimen, *a* in the above list.

Charmosyna stellæ goliathina.

Charmosyna stella goliathina Roths. & Hartert, N. Z. xviii. p. 160 (1911), xx. p. 485 (1913).

a, b. ♂ ♀. Camp 6 c, Utakwa River, 5500 ft., 22nd Feb. 1913. [*C. B. K.*]

c-e. ♂ ♀. Camp 11, Utakwa River, 8000 ft., 9th Feb. 1913. [*C. B. K.*]

Adult male. Bill blood-red ; cere yellow ; feet red-brown.

A good figure of *Charmosyna stellæ* will be found in Mivart [*cf.* Monogr. Loriidæ, p. 179, pl. lviii. (1896)].

The Lories collected by the Wollaston Expedition agree with the birds described from Mt. Goliath in having the longer upper tail-coverts dull green.

This subspecies is new to the British Museum.

Charmosyna josephinae.

Charmosyna josephinae (Finsch) ; Salvad. Cat. xx. p. 84 (1891) ; Mivart, Monogr. Loriidæ, p. 181, pl. lix. (1896) ; van Oort, p. 75 (1909) ; Roths. & Hartert, N. Z. xx. p. 484 (1913).

a. ♀ [♂] imm. Wataikwa River, 26th Oct. 1910. [No. 1441, *G. C. S.*]

b-f. ♂ ♀. Iwaka River, 28th Jan.-10th Feb. 1911. [Nos. 225, 230, 937, 1010, *C. H. B. G.*]

Adult male and female. Iris bright yellow ; bill orange-red ; feet yellow-ochre.

Young male. Iris yellowish-buff ; bill orange-red ; feet dull orange.

The sex of the young example (*a*) has been determined by Mr. Shortridge as "female," but this is almost certainly an error, for the new feathers on the lower back are mostly scarlet, only a few being yellow. It has the occipital patch green mixed with dark blue, instead of uniform purplish-blue. The middle of the breast is mostly dark green, as are also the sides of the belly and flanks, instead of purplish-black, and the middle pair of tail-feathers have the outer half of the outer web green instead of being entirely dull red.

"This Lory is strictly a species of the mountains and cannot be considered common. It frequents the flowering trees in company with other small Parroquets."—*C. H. B. G.*

**Charmosyna atrata*.

Charmosyna atrata Roths. ; Roths. & Hartert, N. Z. xx. p. 485 (1913).

An adult male and a young male were procured on Mt. Goliath at an elevation of 5000 ft. in January 1911.

Oreopsittacus arfaki major. (Pl. V. figs. 1, 1 a.)

Oreopsittacus arfaki major Ogilvie-Grant, Bull. B. O. C. xxxv. p. 11 (1914).

a-e. ♂ ♀. Camp 11, Utakwa River, 8000 ft., 7th-9th Feb. 1913. [*C. B. K.*] (Including the *types of the subspecies.*)

Adult male. Similar to the male of *O. arfaki*, but larger; the scarlet crown extending farther back behind the eye nearly to the occiput, and the middle pair of tail-feathers tipped with scarlet instead of pink.

Adult female. Similar to the female of *O. arfaki*, but larger, and with the middle pair of tail-feathers tipped with scarlet instead of pink.

<i>O. arfaki.</i>		<i>O. a. major.</i>	
1 ♂. Wing 75 mm.		3 ♂. Wing 85, 85, & 87 mm.	
3 ♂. „ 73, 75 & 76 mm.	Tring Museum.		
1 ♀. Wing 73 mm.		2 ♀. Wing 80 & 83 mm.	
1 ♀. „ 73 mm.	Tring Museum.		

Five examples of this new subspecies were procured at one of the higher camps on the Utakwa River at an elevation of 8000 ft. Unfortunately, no particulars respecting the colours of the soft-parts nor any other details regarding them have been noted. All were procured by Chunggat, one of the Dyak collectors, from the Kuala Lumpur Museum. This man and Jagat did signal service on both the B. O. U. and Wollaston Expeditions, procuring many of the novelties met with.

The British Museum possesses the type-specimens of *Oreopsittacus frontalis* Reichenow, which were collected by Emil Weiske above the Aroa River at an elevation of 6000 ft. This is a very distinct form from *O. grandis*



MENPES PRESS, WATFORD.

1. OREOPSITTACUS ARFAKI MAJOR ♂
1A. ♀
2. CHARMOSYNOPSIS MULTISTRIATA.

O.-Grant as far as the male is concerned, but the females are difficult to separate. *O. frontalis* seems to have been re-described recently by Dr. Reichenow as *O. a. intermedius* (J. f. O. 1915, p. 124) from the Sepik district.

A female of *O. grandis*, procured by Mr. Walter Goodfellow at Bagutana Camp, Owen Stanley Range, 8000 ft., has recently been presented to the British Museum by Mr. E. J. Brook. This locality is close to Mount Victoria, where the type-specimens of *O. grandis* were obtained. These eastern forms, unlike *O. arfaki* and *O. a. major*, have no red patch on the breast.

Good figures of *O. arfaki* and *O. grandis* will be found in Mivart's 'Monograph of the Lories,' pp. 185-187, pls. lx. & lxi. (1896).

The specimens figured are the types ♂ & ♀ of the subspecies.

***Neopsittacus muschenbroeki*.**

Neopsittacus muschenbroeki (Schleg.) ; Salvad. Cat. xx. p. 86 (1891) ; Roths. & Hartert, N. Z. xx. p. 485 (1913).

a-c. ♂ imm. Camp 9, Utakwa River, 5500 ft., 3rd Feb. 1913. [*C. B. K.*]

These immature males are certainly referable to this species, and may be easily distinguished from the smaller alpine form described below by their much larger bill and longer wings; also by having the forehead and crown yellowish-green with yellow shaft-streaks, and the occiput and nape brownish-olive; the red colour on the underparts less extensive on the lower breast, and the upper breast scarlet instead of orange-red; the tail-feathers green and scarlet, widely tipped with orange-yellow, instead of green; the under surface of the tail yellow or orange-yellow, instead of dark olive-green.

♂. Arfak Mountains	Wing 113 mm.
2 ad. ? Arfak Mountains	„ 106, 108 mm.
3 ♂ imm. Utakwa River, 5500 ft.	„ 107, 110, 118 mm.
5 ad. & 1 imm. Owen Stanley Mountains....	„ 112, 113, 116, 116, 117, 118 mm.
2 ♂ ♀. Owen Stanley Mountains, 3-4000 ft. .	„ 119, 113 mm.

Neopsittacus muschenbroeki alpinus. (Pl. VI. fig. 1.)

Neopsittacus muschenbroeki alpinus Ogilvie-Grant, Bull. B. O. C. xxxv. p. 12 (1914).

a-c. ♂ ♀. Camp 11, Utakwa River, 8000 ft., 6th-9th Feb. 1913. [*C. B. K.*] [*Types of the subspecies.*]

Adult male and female. Similar to *N. muschenbroeki*, but much smaller, and with a conspicuously smaller bill. They are also distinguished by having the crown of the head and nape dark green like the rest of the upperparts, with scarcely a trace of lighter green or yellowish shaft-streaks; the throat and sides of the body dark green instead of yellowish-green; the chest and upper breast orange-red, the lower breast and belly scarlet; in *N. muschenbroeki* these parts are uniform scarlet; the tail-feathers dark green to the tip, the outer pairs with the greater part of the inner web red instead of being widely tipped with orange-yellow; under surface of the tail dark olive-green instead of yellow or orange-yellow.

Upper mandible blood-red, tip yellow; lower mandible yellow; feet black.

1 ♂.	Total length	190 mm.	Wing	105.	Tail	89 (in moult).
2 ♀.	"	180, 188 mm.	"	99, 103.	"	84 (in moult), 95.

The examples of this interesting alpine form were collected by the Dyak Chunggat at Camp 11, Utakwa River, 8000 ft., between the 6th and 9th of February, 1913. The orange breast is the character which chiefly distinguishes it from *N. m. pullicauda* Hartert [*cf.* N. Z. iii. p. 17 (1896)], the alpine representative of *N. muschenbroeki* in the highlands of British New Guinea.

That this character is not due to wear or fading is proved by the fact that the specimens described are in moult and many of the orange-red breast-feathers are still in sheath.

Among a collection of birds made by Mr. Walter Goodfellow in the Owen Stanley Mountains and presented to the British Museum by Mr. E. J. Brook, there is an adult female example of *N. m. pullicauda* procured at Bagutana Camp, 8000 ft. It is easily distinguished from *N. m. alpinus* by



MENPES PRESS, WATFORD.

1. NEOPSITTACUS MUSCHENBROEKI ALPINUS.
2. CYCLOPSITTACUS GODMANI.

having the chest and upper breast scarlet like the lower breast and belly. Lower down the range, in the Taora District, 3000–4000 ft., Mr. Goodfellow obtained a pair of the typical *N. muschenbroeki*. *N. m. pullicauda* is figured by Count Salvadori in Wytsman's 'Genera Avium, Psittaci,' pt. xii. pl. i. fig. 6 (1910).

The specimen figured is the ♂ type of the subspecies.

***Cyclopsittacus cervicalis.**

Cyclopsittacus cervicalis, Salvad. & D'Alb.; Salvad. Cat. xx. p. 93 (1891).

Cyclopsitta desmarestii cervicalis van Oort, p. 75 (1909).

A female was procured on the Noord River.

Cyclopsittacus godmani. (Pl. VI. fig. 2.)

Cyclopsittacus godmani Ogilvie-Grant, Bull. B. O. C. xxvii. p. 67 (1911).

Opopsitta (*Cyclopsittacus* auct.) *blythi godmani* Roths. & Hartert, N. Z. xx. p. 485 (1913).

a. ♂. Parimàu, Mimika River, 19th Sept. 1910. [No. 215, *C. H. B. G.*] (*Type of the species.*)

b. ♂. Parimàu, 19th Dec. 1910. [No. 770, *C. H. B. G.*]

c. ♂. Launch Camp, Setakwa River, 24th March, 1913. [*C. B. K.*]

d-f. ♂. Canoe Camp, Setakwa River, 24th Nov. & 23rd Dec. 1912. [*C. B. K.*]

This fine species is most nearly allied to *C. occidentalis* Salvad. and *C. blythi* Wallace, and resembles the latter in having no blue-green spot beneath the eye. The adult male differs from both in having the feathers on the cheeks, sides of the head, and throat narrow and much lengthened, forming a distinct beard of a pale orange-yellow colour as long as that of *C. edwardsi* Oustalet. There is a well-defined verditer-blue band across the chest and the sides of the breast, but no trace of red, and the rest of the underparts are grass-green. A bright orange-yellow band crosses the upper mantle, contrasting with the orange-scarlet crown and

scarlet nape. Iris pale hazel ; orbital skin black ; bill black ; feet pale olive-green.

Total length about 200 mm. ; wing 113–115 ; tail 56–65.

Immature males differ from the adult in lacking the yellow band across the upper mantle, which is green like the rest of the upperparts ; the long orange-yellow ear-coverts and feathers forming the beard are less developed, and the verditer-blue feathers of the chest and green feathers of the breast are outlined by dusky margins. Iris grey ; upper mandible black, sides whitish ; lower mandible black, whitish below ; feet greyish-white, scales tinged with dull brown.

The female is not represented in the present collections, but A. S. Meek obtained four on the Island River. These, like the young males, have no yellow band across the mantle.

I may here remark that the British Museum has recently received three fine adult male examples of *C. edwardsi* procured by Mr. Walter Goodfellow at Humboldt Bay. The species was previously represented by a single female example. It is figured by Count Salvadori in Wytzman's 'Genera Avium, Psittaci,' pt. xii. p. 4, pl. ii. fig. 4 (1910).

The specimen figured is the ♂ type of the species.

***Cyclopsittacus diophthalmus*.**

Cyclopsittacus diophthalmus (Hombr. & Jacq.) ; Salvad. Cat. xx. p. 95 (1891).

a. ♂ vix ad. Parimàu, Mimika River, 27th Sept. 1910. [No. 266, *C. H. B. G.*]

This specimen seems to be a typical example of *C. diophthalmus*, which was described from a bird procured on the south coast of New Guinea. All the specimens in the British Museum are from Misol and Salawatti. The present specimen, which I believe to be a not quite adult male, has no yellow band bordering posteriorly the red on the crown.

C. d. coccinneifrons Sharpe, from the Astrolabe Mountains, of which the British Museum now possesses six examples including the type-specimen, appears to me to be easily

separable as a subspecies; in the male the red on the forehead and cheeks is of a rather dull crimson-scarlet, instead of bright scarlet, and the yellow band across the crown is distinctly wider. Messrs. Rothschild and Hartert [*cf.* Nov. Zool. viii. p. 74 (1901)] seem rather doubtful as to whether *C. d. coccineifrons* should be allowed to rank as a subspecies, but I think its claims to such rank are perfectly well established.

Cyclopsittacus melanogenys fuscifrons.

Cyclopsittacus fuscifrons Salvad. Ann. Mus. Civ. Genov. ix. p. 14 (1876).

Cyclopsittacus melanogenys Schleg.; Salvad. Cat. xx. p. 99 (1891) [part. New Guinea].

Cyclopsitta melanogenia fuscifrons van Oort, p. 76 (1909).

a-g. ♂ ♀. Mouth of the Mimika River, 11th–15th Dec. 1910 and 21st March, 1911. [Nos. 121, 125, 127, 131, 133, 143, 1221, *C. H. B. G.*]

h-m. ♂ ♀. Parimau, Mimika River, 30th Aug., 2nd Oct., & 27th Dec., 1910. [Nos. 38, 40, 288, 289, 850, *C. H. B. G.*]

n, o. ♂. Wataikwa River, 22nd & 26th Sept. 1910. [Nos. 1226, 1250, *G. C. S.*]

p-s. ♂ ♀. Canoe Camp, Setakwa River, 7th Dec. 1912 & 1st Jan. 1913. [*C. B. K.*]

Iris hazel-brown; bill sooty or black; feet ash-grey to pale olive-green.

I can find no real difference between males of *C. melanogenys* Schleg. from the Aru Islands and *C. m. fuscifrons* from Southern New Guinea. The type-specimen of the latter was procured on the Fly River by D'Albertis. Dr. van Oort has, however, very properly pointed out that the females of the two forms are quite different, *C. m. fuscifrons* having the breast bright orange as in the male, while in *C. melanogenys* the chest is greenish, suffused with orange and not very clearly differentiated from the rest of the underparts.

Nos. 133 and 289, which have the feathers behind the black cheek-spot orange, have been marked as males, but are almost certainly females.

No. 131, a male, is a curious variation: nearly all the primary quills are white with black shafts, and most of the secondary quills and tail-feathers, as well as numerous feathers scattered over the back and wing-coverts, are pale yellow.

This subspecies was not represented in the British Museum.

"This little Parrot occurred sparingly everywhere and was always seen in pairs. The Dyak collector Chunggat informed me that it was quite plentiful near the coast when he was there in November and December 1910.

"It is not a very active bird, and when disturbed only flies a very short distance."—*C. H. B. G.*

Family PSITTACIDÆ.

Solenoglossus aterrimus goliath.

Count Salvadori in a footnote (Cat. xx. p. 102) states that *Solenoglossus* Ranzani, Elem. di Zool. iii. pt. 2, p. 18 (1821) has priority over *Microglossus* Vieill. Gal. des Ois. i. pt. 2, p. 47, pl. 50 (1821–23). He does not, however, use the former name, as "it conveys quite a false idea of the structure of the tongue." Page 47 appeared in Livr. 10 & 11, published on 2nd Feb. 1822 (*vide* C. D. Sherborn).

Psittacus goliath Kuhl, Consp. Psittacorum, p. 92 (1820). [Type-locality, East Indies = New Guinea, *mih.*]

Microglossus aterrimus (Gmel.); Salvad. Cat. xx. p. 103 (1891) [part.]; van Oort, p. 70 (1909).

Microglossus aterrimus stenolophus van Oort, Notes, xxxiii. p. 240 (1911). [Humboldt Bay & Lake Sentani].

Solenoglossus aterrimus Roths. & Hartert, N. Z. xx. p. 485 (1913).

a. ♀. Wakatimi, Mimika River, 1st Jan. 1911. [No. 207, *C. H. B. G.*]

b. ♀. Lower Mimika, Feb. 1910. [*W. G.*]

c, d. ♂. Parimau, Mimika River, 15th Sept. & 3rd Oct. 1910. [Nos. 199, 298, *C. H. B. G.*]

e, f. ♂ ♀. Wataikwa River, 21st Oct. 1910. [Nos. 1407, 1408, *G. C. S.*]

y. ♀. Launch Camp, Setakwa River, 11th Oct. 1912.
[C. B. K.]

h-l. ♂. Camp 3, Utakwa River, 2500 ft., 11th-30th
Dec. 1912. [C. B. K.]

m. Head only. Camp 3, Utakwa River. [C. B. K.]

Iris hazel or brown ; bill and orbital ring black ; bare skin
on the face red, or flesh-colour, washed with pinkish-red.

Messrs. Rothschild and Hartert recognize three subspecies
of Black Cockatoos, viz. :—

1. "A very large form." Mainland of New Guinea.
2. "An intermediate and blacker race." Cape York.
3. "A smaller one." Western Papuan Islands.

These conclusions are borne out by the fairly large series
now in the British Museum, as the following wing-measure-
ments will show :—

Solenoglossus aterrimus (Gmel.). [Type-locality,
New Holland = Cape York.]

Solenoglossus aterrimus macgillivrayi Mathews, N. Z. xviii.
p. 261 (1912).

Cape York.

British Museum.	Tring Museum.
Wing.	Wing.
3 ♂. 355-368 mm.	
2 ♀. 335, 341 mm.	

Solenoglossus aterrimus goliath (Kuhl):

New Guinea.

British Museum.	Tring Museum.
8 ♂. 375-391 mm.	7 ♂. 375-400 mm.
6 ♀. 346-365 mm.	2 ♀. 350, 360 mm.

Solenoglossus aterrimus alecto (Temm.).

Type-locality restricted to the Western Papuan Islands and
Aru Group [cf. Roths. & Hartert, N. Z. viii. p. 77 (1901)].

British Museum.	Tring Museum.
Aru. 3 ♂. 325-335 mm.	Aru. 2 ♂. 325, 334 mm.
„ 1 ♀. 313 mm.	„ 2 ♀. 310, 315 mm.
Misol. [♂]. 355 mm.	Misol. ♀ [♂]. 341 mm.
	Salawatti. ♂. 340 mm.

Messrs. Rothschild and Hartert [N. Z. viii. p. 77 (1901)] restricted the name *Eurhynchus alecto* Lesson to the small race from the Western Papuan Islands. Subsequently Mr. Mathews [N. Z. xviii. p. 261 (1912)] restricted the name *Psittacus aterrimus* Gmel. from 'New Holland' to the bird found on the Island of Salawatti on which the name *Solenoglossus aterrimus alecto* (Less.) had already been bestowed, and renamed the Queensland bird *Solenoglossus aterrimus macgillivrayi*, but, as shown, this is a pure synonym of *S. aterrimus* (Gmel.).

For the New Guinea bird, the largest of the three races, the name *Psittacus goliath* Kuhl seems to be the oldest available.

The supposed new form from Humboldt Bay named *M. a. stenolophus* by Dr. van Oort appears to be based on examples with the crest-feathers worn. We have such a specimen from his type-locality in the collection.

"The New Guinea Black Cockatoo was a common bird everywhere, and usually seen singly, but sometimes in pairs. It has a slow and graceful flight. Its call is a beautiful clear whistle, often in a descending scale. As a rule it perches on the tallest trees, and, though tame, is usually out of shot."—*C. H. B. G.*

Cacatua triton.

Cacatua triton (Temm.) ; Salvad. Cat. xx. p. 118 (1891) ; Ogilvie-Grant, P. & P. p. 288 (1912) ; id. Ibis, 1913, p. 99 ; Roths. & Hartert, N. Z. xx. p. 486 (1913).

Cacatua galeritus triton van Oort, p. 70 (1909).

a, b. ♂. Upper Mimika River, 4th Feb. 1911. [*W. G.*, & No. 1025, *G. C. S.*]

c-e. ♂ ♀. Parimau, Mimika River, 2nd & 18th Sept. and 15th Nov. 1910. [Nos. 104, 209, *C. H. B. G.* ; & 1516, *G. C. S.*]

f, g. ♀. Wataikwa River, 18th Sept. & 20th Oct. 1910. [Nos. 1184, 1402, *G. C. S.*]

h. ♂. Iwaka River, 27th Jan. 1911. [No. 928, *C. H. B. G.*]

i. ♂. Launch Camp, Setakwa River, 2nd Oct. 1912.
[*C. B. K.*]

Male. Iris dark brown, or dark reddish-brown; bare skin surrounding the eye very pale blue, dark blue round the eye; bill and feet black.

Female. Iris crimson or deep crimson; bare skin round the eye bluish-white; bill and feet slate-black.

The measurements are as follows:—

4 ♂. Wing, 300, 305, 307, 322 mm.

4 ♀. Wing, 290, 300, 307, 310 mm.

Measurements taken from Dr. van Oort's report:—

4 ♀. Wing, 285, 297, 298, 300 mm.

The type-specimen of *Psittacus triton* Temm. was obtained on Aiduma Island, off Triton Bay, and is in the Leyden Museum. Dr. van Oort gives the wing-measurement of this specimen, a female, as 310 mm.; he also supplies measurements of birds from various other localities in New Guinea, and in the Aru Islands, where a smaller race, *C. t. macrolopha*, Rosenb., is found.

“The White Cockatoo was common everywhere, and was generally seen in pairs. It utters the most discordant shrieks and noises on observing an intruder, and is most annoying when one is in pursuit of other birds. On two or three occasions I have seen pairs entering or leaving what I took to be their nesting-holes; these were usually situated in the straight clean trunk of a very tall tree, and at a great height from the ground.”—*C. H. B. G.*

Nasiterna keiensis.

Nasiterna keiensis Salvad.; id. Cat. xx. p. 142 (1891); Ogilvie-Grant, P. & P. p. 287 (1912); id. Ibis, 1913, p. 99.

Nasiterna pygmaea viridipectus Roths. Bull. B. O. C. xxvii. p. 45 (1911).

Nasiterna keiensis viridipectus Roths. & Hartert, N. Z. xx. p. 486 (1913).

a-c. ♂. Wakatimi, Mimika River, 29th Sept. 1910, and 4th & 6th March, 1911. [Nos. 1265, *G. C. S.*, & 1087, 1103, *C. H. B. G.*]

d-m. ♂ ♀. Parimau, Mimika River, 23rd Sept.-25th Dec. 1910. [Nos. 241, 242, 278, 280, 588, 674, 763, 826, *C. H. B. G.*; & 1526, *G. C. S.*]

n. ♀. Launch Camp, Setakwa River, 16th March, 1913. [*C. B. K.*]

o. ♂. Canoe Camp, Setakwa River, 17th March, 1913. [*C. B. K.*]

p. Juv. (in spirits, taken from a hole low down in a tree-trunk). Launch Camp, Setakwa River, 29th March, 1913. [*C. B. K.*]

Total length in the flesh, ♂ and ♀ 95 mm. (=3.75 inches).

Iris dark brown (bright orange in one female); bill black or ash-colour; feet light slate-colour or purplish-grey.

This species is new to the British Museum.

Messrs. Rothschild and Hartert have attempted to uphold the validity of *N. k. viridipectus* Roths., but the measurements of our much larger series given below seem to prove that there is no real difference in size between birds from the Kei Islands and those from Southern New Guinea. The size of the bill varies individually to a considerable extent in both males and females.

	Kei Islands. Wing.	South New Guinea. Wing.
British Museum....	0	9 ♂. 59-64 mm. 3 ♀. 58, 60, 61 mm.
Tring Museum	♂. 63-65 mm. ♀. 61-62 mm.	3 ♂. 62 mm. 1 ♀. less than 60 mm.

"This Pigmy Parrot cannot be considered common. It inhabits the depths of the jungle, and was always observed in pairs. It was always met with on the numerous ants' nests of mud at the bases of the larger trees. On being disturbed it merely flew up to the nearest branches, and generally both birds were easily secured. It has a low, insignificant call-note."—*C. H. B. G.*

Nasiterna bruijnii.

Nasiterna bruijnii Salvad.; id. Cat. xx. p. 139 (1891); Roths. & Hartert, N. Z. xx. p. 486 (1913).

a, b. ♂ et ♂ imm. Camp 3, Utakwa River, 2500 ft., 25th Nov. 1912. [C. B. K.]

c, d. ♂. Camp 9, Utakwa River, 5500 ft., 25th Jan. & 3rd Feb. 1913. [C. B. K.]

♂. Iris brown; bill greyish-horn-colour; feet pale greyish-lead-colour. ♀. Iris brown; bill pale grey, dark slate at the base, and nearly white at the tip; feet pale grey.

Typical specimens from Arfak do not appear to differ from those found in the mountains of South-east New Guinea. Very fine male and female examples of this lovely little Parrot were collected by Mr. Walter Goodfellow at Bagutana Camp, 8000 ft., in the Owen Stanley Range near Mount Victoria, and presented to the British Museum by Mr. E. J. Brook. Emil Weiske obtained the species on the Aroa River at an altitude of 5000 ft. A. S. Meek procured several specimens on Mt. Goliath at about 5000 ft.

Dasyptilus pesqueti.

Dasyptilus pesqueti (Lesson); Salvad. Cat. xx. p. 385 (1891); Ogilvie-Grant, P. & P. p. 290 (1912); id. Ibis, 1913, p. 101; Roths. & Hartert, N. Z. xx. p. 486 (1913).

Dasyptilus pecquetii van Oort, p. 71 (1909).

a-c. ♂ ♀. Upper Mimika River, Feb.-Aug. 1910. [W. G.]

d-g. ♂ ♀. Parimau, Mimika River, 10th May, 14th Sept., & 15th Nov. 1910. [Nos. 194, 195, C. H. B. G.; & 1517, G. C. S.]

h-k. ♂ ♀. Wataikwa River, 28th Sept. and 21st & 26th Oct. 1910. [Nos. 1271*, 1409, 1440, G. C. S.]

l, m. ♂ ♀. Iwaka River, 13th Feb. 1911. [Nos. 1039, 1040, C. H. B. G.]

n-q. ♂ ♀. Canoe Camp, Setakwa River, 9th & 15th Nov., 10th Dec. 1910. [C. B. K.]

r-h. ♂ ♀. Camp 3, Utakwa, 2500 ft., 28th Nov.-30th Dec. 1912. [C. B. K.]

Iris dark brown; naked skin on the head and feet black.

Males may be distinguished from females by having a small scarlet patch of feathers behind the eye and above the

ear-coverts which sometimes extends along the edge of the feathering of the crown.

The Vulturine Parrot bears a marked external resemblance to the Kea of New Zealand. Mr. Goodfellow tells us its hoarse grating call, quite unlike that of any other species, could be heard a long way off, and was continually uttered when on the wing: It usually moves about in parties of four or five individuals, though occasionally as many as seven may be seen together. When not feeding they always select the tallest trees to rest on, preferring dead ones which tower above the general level of the jungle, and in which they remain for hours at a time in rain or sunshine. They do not climb after the usual method of parrots, but jump from branch to branch with a jerky movement, like the Lories, and with a rapid flicking movement of the wings. They feed entirely on soft fruits, especially wild figs. Apparently the birds feed on the plains and retire to the mountains to roost, for every evening flocks or pairs were observed passing high over the camp at Parimau, and making their way towards the Saddle-peak range.

***Eclectus pectoralis*.**

Electus pectoralis (Müll.) ; Salvad. Cat. xx, p. 389 (1891) ; van Oort, p. 71 (1909) ; Roths. & Hartert. N. Z. xx. p. 487 (1913).

a-e. ♀. - Wakatimi, Mimika River, Feb., 23rd Aug., 21st Nov., & 24th Dec. 1910, and 3rd March, 1911. [*W. G.*, & Nos. 16, 170, 1080, *C. H. B. G.* ; 1538, *G. C. S.*]

f-h. ♂ ♀. Upper Mimika River, Feb. 1st., 27th April, & 1st May, 1910. [*W. G.*, & Nos. 1133, 1143, *G. C. S.*]

i-t. ♂ ♀ et ♂ ♀ imm, Parimau, Mimika River, 30th Aug. 1910-3rd Jan. 1911. [Nos. 58, 88, 103, 152, 153, 764, 782, 862, 863, 864, *C. H. B. G.*]

u-w. ♂ ♀. Wakatima River, 20th Sept.-31st Oct. 1910. [Nos. 1201, 1450, 1461, *C. H. B. G.*]

x-h. ♂ ♀. Launch Camp, Setakwa River, 4th Oct.-8th Nov. 1912. [*C. B. K.*]

i. ♀. Canoe Camp, Setakwa River, 30th Oct. 1912. [*C. B. K.*]

Adult male. Iris orange or fiery-red ; orbital skin dark slate-colour ; upper mandible scarlet, tipped with yellow, lower mandible black ; feet dark olive-green or black.

Adult female. Iris pale yellow ; bill and feet black.

The fully adult male has the outer pairs of tail-feathers almost entirely purplish-blue ; in young birds (Nos. 58 & 764) they are more pointed and mostly dark green, only a patch near the end of the outer web being blue ; the middle pairs are also tipped with red, as in the younger birds noted by Dr. van Oort.

A young female (No. 862) has some of the tail-feathers green towards the base, while in the adult all the tail-feathers have the basal two-thirds dark red-maroon, though in some specimens there is a trace of green on the outer web of the outer pair.

"The Red-sided Eelectus is quite a common species everywhere, especially near the coast. Large numbers came every night to roost in the swamps at the back of our camp at Wakatimi. Though numbers congregated to roost in one spot, they arrived in small lots of two or three, or, at the most, six together, and these were the usual number seen together throughout the country. It has a loud cry and a swift straight flight."—*C. H. B. G.*

Geoffroyus aruensis.

Geoffroyus aruensis (Gray) ; *Salvad. Cat.* xx. p. 404 (1891).

Geoffroyus personatus aruensis van Oort, p. 72 (1909) ; *Roths. & Hartert, N. Z.* xx. p. 486 (1913).

a-d. ♂ ♀ et ♀ juv. Mouth of the Mimika River, 10th–16th Dec. 1910 & 23rd March, 1911. [Nos. 98, 157, 158, 1258, *C. H. B. G.*]

e-g. ♂ ♀. Wakatimi, Mimika River, 1st Jan. & 6th–28th March, 1911. [Nos. 211, 1107, 1126, *C. H. B. G.*]

h-u. ♂ ♀. Parimau, Mimika River, 4th Sept.–26th Dec. 1910. [Nos. 197, 234, 249, 501, 552, 571, 627, 628, 651, 753, 772, 830, 831, *C. H. B. G.*]

v-z. ♂ ♀. Canoe Camp, Setakwa River, 26th Nov.–26th Dec. [*C. B. K.*]

a'. ♂. Camp 1, Setakwa River, 700 ft., 20th Nov. 1912.
[*C. B. K.*]

Adult male. Iris yellow; upper mandible scarlet, yellow at the tip, lower mandible horn-brown, cere olive-brown; feet dull olive.

Adult female. Iris yellow; both mandibles dark horn-brown, cere dark olive; feet olive-green.

A young female (No. 1258) has the feathers in front of the eye and on the sides of the head and cheeks light brown tinged with greenish; the tail bright yellowish-green with chestnut and green plumes on the tips of the shafts; the upper tail-coverts similar, and the rest of the plumage, including the crown, dark green, but with traces of the reddish-brown patch on the least wing-coverts, some being centred with that colour. Iris greyish-white; orbital skin yellowish; bill dark yellow, tip and nostrils paler; feet and toes pale olive-green.

"This Red-faced Parrot is a tolerably common species and always to be seen in pairs. It is a very tame and confiding bird, and its movements and flight are rather heavy. The call is a very clear, sharp, single note."—*C. H. B. G.*

****Geoffroyus pucherani*.**

Geoffroyus pucherani Bonap.; *Salvad. Cat.* xx. p. 407 (1891).

Geoffroyus personatus pucherani van Oort, p. 72 (1909);

A male of this Parrot was procured at Etna Bay.

***Geoffroyus simplex*.**

Geoffroyus simplex (Meyer); Gould, *B. New Guinea*, v. pl. 29 (1877); *Salvad. Cat.* xx. p. 413 (1891); Ogilvie-Grant, *P. & P.* p. 289 (1912); *id. Ibis*, 1913, p. 100; Roths. & Hartert, *N. Z.* xx. p. 486 (1913);

a, b. ♂. Iwaka River, 7th & 8th Feb. 1911. [Nos. 228, 228 A, *C. H. B. G.*]

Iris, outer ring pale Naples yellow, inner ring green; bill black; feet pale olive.

As already pointed out by Messrs. Rothschild & Hartert, the figure given by Gould has the ring surrounding the neck much bluer and more strongly marked than in specimens recently procured by our expeditions in Southern New Guinea. Personally I have no doubt that the colour in the figure of the type-specimen is exaggerated, for the description of the bird given by Gould agrees quite well with our specimens. When freshly moulted the whole of the upper-parts are dark green, but as the tips and other parts of the feathers become worn they turn black.

"The Lilac-collared Parrot was only observed in the mountains beyond my highest camp on the Iwaka River. There flocks of upwards of twenty individuals were seen every day. The flight is rapid and graceful, the flocks on being alarmed dashing backwards and forwards over the top of the jungle before they again perch. The call is composed of several very melodious whistling notes, and is more often heard when single birds or pairs are passing. It is a very shy bird, taking flight at the slightest alarm and, though common, only two were shot."—*C. H. B. G.*

****Ptistes erythropterus coccineopterus*.**

Ptistes erythropterus (Gmel.); Salvad. Cat. xx. p. 481 (1891) [part.].

Ptistes erythropterus coccineopterus Gould; van Oort, Notes, xxxii. p. 80 (1910).

A female from Merauke is referred by Dr. van Oort to the smaller race of this Australian species. It has previously been recorded from the south coast of New Guinea by Wallace (P. Z. S. 1861, p. 436) and von Rosenberg (J. f. O. 1864, p. 112), though these records were supposed to be erroneous by Count T. Salvadori [Orn. Pap. i. p. 144 (1880)].

***Aprosmictus callopterus wilhelminæ*.**

Aprosmictus wilhelminæ Ogilvie-Grant, Bull. B. O. C. xxvii. p. 83 (1911); id. P. & P. p. 290 (1912); id. Ibis, 1913, p. 102.

Aprosmictus callopterus van Oort (nec D'Alb. & Salvad.) p. 72 (1909).

Aprosmictus callopterus wilhelminæ Roths. & Hartert, N. Z. xx. p. 487 (1913).

a, b. ♂. White Water Camp, Kaparé River, 22nd Oct. 1910. [Nos. 361, 362, *C. H. B. G.*] [No. 361, *Type of the subspecies.*]

c, d. ♂ et ♀ imm. Iwaka River, 31st Jan. & 8th Feb. 1911. [Nos. 970 & 970A, *C. H. B. G.*]

e-h. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 29th Nov.-24th Dec. 1912. [*C. B. K.*]

Since the description of *A. wilhelminæ* was drawn up I have received further specimens obtained on the Iwaka River by the B. O. U. Expedition, and two adult pairs from the Utakwa River collected by the Wollaston Expedition. One male among the latter has all the scapulars dark green as in the type-specimen, while in the other one or two of the scapular feathers are shaded with blackish, indicating an approach toward typical *A. callopterus* from the Fly River. For this reason the present form cannot be regarded as more than a subspecies of *A. callopterus*. Another close ally, *A. c. chloropterus* Ramsay, from South-east New Guinea, has the blue on the upper mantle continued on to occiput in a broad band.

The adult male differs from *A. callopterus* in having the scapulars dark green instead of black ; and the purplish-blue area restricted to the upper portion of the mantle. The iris is orange, the orbits olive-brown ; bill black, basal part of the upper mandible deep orange ; feet sooty-black. Wing 197 mm., tail 212.

The adult female resembles the female of *A. callopterus* figured by Gould, and has the feathers of the fore-neck and chest green rather widely barred across the tip with dull crimson-scarlet : the two outer pairs of tail-feathers are tipped with pink, but this is clearly a variable character and may be absent.

A female in first plumage has the fore-neck and chest dull green with indistinct brownish margins to the feathers ; the tail-feathers, mostly of the first plumage (only the three outer pairs on the right side having been moulted) are pointed at

the extremity, narrowly tipped with pink and with a pink plumelet still adhering to the point of the shaft.

"Queen Wilhelmina's Parrot is a mountain-bird, and was first seen on the Saddle Peak range near the pigmy village of Wamberimi, where I was camped for five weeks. Only one other example was seen there besides the two shot. On the Iwaka River it was by no means scarce, though very wild, and was observed in lots of two or three, but never more, frequenting the middle of the larger trees. It has a slow flight, and when perched its actions remind one of those of a Plantain-eater (*Turacus*). The only sound I heard it utter was a low "guu," which was undoubtedly its alarm-note."—*C. H. B. G.*

****Aprosmictus dorsalis*.**

Aprosmictus dorsalis Quoy & Gaim. ; Salvad. Cat. xx: p. 491 (1891).

Aprosmictus amboinensis dorsalis van Oort, p. 72 (1909).

An adult specimen was procured at Etna Bay.

****Psittacella lorentzi*.**

Psittacella lorentzi van Oort, Notes, xxxii. p. 212 (1910).

This species appears to be quite distinct. The male differs from that of *P. brehmi*, chiefly in having the sides of the head green, with a bluish wash, an orange spot on each side of the neck, and the feathers of the rump black with golden-yellow cross-bars.

The type of this species, an adult male, was procured in the Wichmann Mountains at an elevation of 10,000 feet.

A young male was procured in the Snow Mountains at 11,800 feet.

***Psittacella brehmi pallida*.**

Psittacella brehmi Schleg. ; Salvad. Cat. xx: p. 498 (1891) [part., S.E. New Guinea] ; Roths. & Hartert, N. Z. xx. p. 487 (1913).

Psittacella brehmi pallida Meyer ; Hartert, N. Z. iii. p. 18 (1896).

a. ♂ . Camp 6 A, Utakwa River, 2900 ft., 20th Jan. 1913.
[C. B. K.]

b. ♀ . Camp 6 B, Utakwa River, 4200 ft., 8th Feb. 1913.
[C. B. K.]

c-e. ♂ ♀ . Camp 6 c, Utakwa River, 5500 ft., 17th-25th
Feb. 1913. [C. B. K.]

f. ♂ . Camp 9, Utakwa River, 5500 ft., 30th Jan. 1913.
[C. B. K.]

Adult male. Bill pale lavender-blue ; feet pale lavender,
soles dull yellow.

While agreeing with Dr. Hartert that *P. b. pallida* should be kept separate from *P. brehmi* (Schleg.) from the Arfak Mountains, I find that our series of birds from Southern New Guinea are undoubtedly referable to the former, which inhabits South-eastern New Guinea. Both males and females are easily distinguished from *P. brehmi* by the yellowish-green breast and abdomen. The coloration of the head does not appear to afford a distinctive character. I have examined the birds from Mt. Goliath and find they are undoubtedly referable to *P. b. pallida* and not to *P. brehmi*.

Psittacella modesta collaris.

Psittacella modesta Roths. & Hartert (nec Schleg.), N. Z.
xx. p. 487 (1913).

Psittacella modesta collaris, Ogilvie-Grant, Bull. B. O. C.
xxxv. p. 13 (1914).

a. ♂ . Camp 6 c, Utakwa River, 5500 ft., 19th Feb.
1913. [C. B. K.]: (*Type of the subspecies.*)

b-d. ♂ ♀ imm. Camp 11, Utakwa River, 8000 ft., 7th &
8th Feb. 1913. [C. B. K.]

Both the male birds, from the Utakwa River, have a distinct pale yellow collar below the nape, dividing the feathers of the head, which are dark brown with indistinct dull orange middles, from the green back. In a typical male specimen of *P. modesta* from the Arfak Mountains this character is wanting, but the whole occiput and nape are suffused with dull brownish-orange which merges gradually into the brown of the forehead.

In two male specimens from the Goliath Mountains, kindly sent from the Tring Museum for examination, the yellow nuchal band is strongly indicated, especially in one obtained on the 5th of February, 1911. In two adult females, also from the Goliath Mountains, the nape is almost similarly coloured, but the yellow is more diffused and is more or less confined to the middles of the feathers. The only typical female specimen of *P. modesta* from Arfak in the British Museum, like the male from that locality, has no distinct yellow markings on the nape, but the whole of that region is brown slightly washed with orange. Both the females procured on the Utakwa River are very similar to the Arfak bird mentioned above, but these it should be noted are both immature, as is shown by the pointed tail-feathers with fine plumes still attached to the extremity of the shafts.

Count Salvadori, who has examined a number of specimens from the Arfak, clearly says that the male of *P. modesta* differs from that of *P. brehmi* in lacking the yellow collar [O. P. i. p. 141 (1880)].

It thus seems certain that the specimens procured by the Wollaston Expedition on the Utakwa from 5500–8000 ft., as well as those procured by A. S. Meek on Mt. Goliath at elevations above 5000 ft., represent a distinct subspecies which has been described as follows:—

Adult male. Differs from the male of *P. modesta* (Schleg.) in having a pale yellow nuchal collar dividing the brown feathers of the head, which have dull orange middles, from the green back. In *P. modesta* the head and hind-neck are brown, washed with yellowish-olive on the occiput and nape. Upper mandible plumbeous, edge whitish, lower mandible brown, tip whitish; feet plumbeous black. Wing 94 mm.

Adult female. Very similar to the female of *P. modesta*, but with the head and nape coloured almost as in the male though the yellow collar is less defined. Bill horny brown, tip yellow; feet black. Wing 95 mm.

The British Museum now possesses a series of *P. madaraszi* Meyer from South-east New Guinea which includes two immature males. These resemble the adult female and

have the same bluish forehead, but the barred markings on the occiput and hind-neck are reddish-chestnut and black instead of mostly orange-yellow and black. The female of *P. madaraszi* is strikingly different from those of the other two species of the genus *Psittacella*, having the underparts uniform green.

***Loriculus aurantiifrons meeki*.**

Loriculus aurantiifrons Salvad. (nec Schleg.) Cat. xx. p. 537 (1891).

Loriculus aurantiifrons meeki Hartert, N. Z. ii. p. 62 (1895) [Fergusson I.]; viii, p. 88 (1901) [S.E. New Guinea].

Loriculus aurantiifrons batavorum Stresemann, J. f. O. 1913, p. 602 [Utakwa River, 3000 ft.]; Roths. & Hartert, N. Z. xx. p. 488 (1913) [Setakwa R. & Utakwa R., 2000-3000 ft.].

a-c. ♂ ♀. Parimau, Mimika River, 8th Nov. & 3rd Dec. 1910. [Nos 1483, *G. C. S.*; & 485, 638, *C. H. B. G.*]

d. ♂. Canoe Camp, Setakwa River, 4th Nov. 1912. [*C. B. K.*]

Iris cream-colour in the male, dark brown in the female; bill black; feet yellow-ochre or olive.

L. a. meeki is separable from *L. aurantiifrons* Schleg. from Misol as a slightly larger race with a smaller bill, the male having the patch on the forehead yellower and less extensive, while the female has no red at the base of the feathers of the forehead. I cannot see how *L. a. batavorum* Stresemann can be maintained. Our birds from the Mimika River and Setakwa River differ in no way from specimens from South-east New Guinea and Fergusson Island, the type-locality of *L. a. meeki*.

I have examined the type-specimens of *L. a. batavorum* in the Tring Museum from the Utakwa River and Setakwa River, and, as will be seen by the measurements given below, the differences in size, which is their only claim to distinction, are trifling. Specimens examined measure as follows:—

L. aurantiifrons (Schleg.).

BRITISH MUSEUM.

TRING MUSEUM.

	Wing. mm.
♂. Misol	70

L. a. batavorum Stresemann.

BRITISH MUSEUM.

TRING MUSEUM.

	Wing. mm.		Wing. mm.
♂. Arfak	69	♂. Waigiu	69
♂. Has	65	♂. Utakwa R.	68
♂. Parimau	67	(Type of <i>L. a. batavorum</i> .)	
♂. Setakwa R.	71	♀. Setakwa R.	67
♀. Parimau	68	♀. " 	67
♀. " 	69		

L. a. meeki Hartert.

BRITISH MUSEUM.

TRING MUSEUM.

	Wing. mm.		Wing. mm.
♀. Kumusi R.	70	♂. Fergusson I.	71
♀. Milne Bay	74	(Type of <i>L. a. meeki</i> .)	
♀. S.E. New Guinea	74	♂. Fergusson I.	72
		♂. Kumusi R.	72
		♂. " 	73
		♀. Fergusson I.	70
		♀. Kumusi R.	76
		♀. " 	75
		♀. " 	71
		♀ imm. Milne Bay	72

As will be seen from the above lists, there are no females of *L. aurantiifrons* in either the British Museum or the Tring Museum, and the birds catalogued by Count Salvadori are all referable to *L. a. meeki*.

"This tiny Love-bird was scarce, and was always observed in pairs. If one was shot the other took flight; but it was by no means a wild bird, and the pair could always be secured."—*C. H. B. G.*

Family BUBONIDÆ.

****Ninox rufistrigata assimilis*.**

Ninox connivens assimilis Salvad. & D'Alb.; van Oort, Notes, xxxii. p. 80 (1910).

A male was procured at Merauke.

The New Guinea bird is certainly a subspecies of *N. rufistrigata* (Gray) from Gilolo; but I am by no means convinced that it should be regarded as a subspecies of the much larger *N. connivens* Lath. from Eastern Australia.

All Australian specimens of both *N. connivens* and *N. c. peninsularis* are easily recognised by the strongly marked light or whitish bands across the tail-feathers, which are tipped with the same colour: *N. rufistrigata* and *N. r. assimilis* have only faintly indicated cross-bars on the tail-feathers, which are narrowly margined with whitish at the tips.

***Ninox theomacha*.**

Ninox theomacha (Bonap.); Sharpe, Cat. ii. p. 178 (1875); Salvad. O. P. p. 79 (1880), Aggiunte, p. 22 (1889).

a. ♀. Upper Mimika River, Sept. 1910. [W. G.]

b, c. ♂ et ♀ juv. Parimau, Mimika River, 29th Nov. & 16th Dec. 1910. [Nos. 617, 747, C. H. B. G.]

d. ♂. White Water Camp, Kaparé River, 13th Oct. 1910. [No. 308, C. H. B. G.]

e. ♂. Wataikwa River, 30th Sept. 1910. [No. 1279, G. C. S.]

f. ♂. Iwaka River, 9th Feb. 1911. [No. 1007, C. H. B. G.]

Adult male and female: Iris lemon-chrome or amber-yellow; eyelid black; bill blackish or greenish-slate, tip whitish-buff or pale horn-colour, cere dull yellow; feet pale yellow or lemon-yellow.

Total length of a male in the flesh 266 mm.

The young specimen (c) in nearly uniform dark brown plumage and down agrees fairly well with the description given by Sharpe (Mith. Zool. Mus. Dresden, 1878, p. 359) of a young specimen in the Dresden Museum.

The type-specimen of this remarkable species was described by Bonaparte from Triton Bay in South-west New Guinea, about 150 miles west of the Mimika River. Until the present collection arrived the species was not represented in the British Museum, the two specimens named *N. theomacha* by Sharpe having been wrongly identified. The two birds in question were collected by A. Goldie in the Astrolabe Mountains, and received by the Museum in 1882 and 1883 respectively. They are referable to two distinct species, viz. :—

1. *Ninox terricolor* Ramsay, Pr. Linn. Soc. N.S.W. iv. p. 466 (1879) [type from Goldie River] ; Salvad. Orn. Pap. iii. p. 511 (1882).

2. *Ninox goldii* Gurney, Ibis, 1883, p. 171 [S.E. New Guinea, A. Goldie].

Ninox goldiei Salvad. O. P., Aggiunte, p. 22 (1889).

Sharpe [Journ. Linn. Soc. Lond. xvii. p. 407 (1884)] united both these species with *N. theomacha* ; but with examples of all these three species of *Ninox* now available for comparison, it becomes evident that he was mistaken, and that we have to deal with three quite distinct forms.

N. terricolor is a smaller bird, with the chestnut of the underparts mixed with white on the belly *only*. It has a wing-measurement of 165–183 mm. (6·5–7·2 inches).

N. goldii is a larger bird, with the whole of the chestnut underparts heavily spotted and marked with white from the throat downwards. The wing measures 221–227 mm. (=8·7–8·95 inches).

The difference in size of the male and female in these species of *Ninox* is not very great. Of the two specimens collected by Goldie in the Astrolabe Mountains and referred to above, the specimen of *N. terricolor* happened to be a male, that of *N. goldii* a female, and this led Sharpe to suppose that they must be male and female of the same species ; he also made the further mistake of considering both names to be synonyms of *N. theomacha* (*cf. op. cit.* p. 407).

N. theomacha most nearly resembles *N. terricolor* both in

colour and size, but the feathers of the lower breast and belly are mixed with buff, instead of with white. The wing in three males measures 170–175 mm. The only adult female has the wing-feathers broken, but must have measured approximately 170 mm.

“This little Owl was by no means uncommon throughout the middle belt and the mountains, but was neither heard nor seen near the coast. It is distinctly a night bird, and is never heard in the daytime; but as soon as it becomes dark, its weird two-syllabled call ‘yow yow’ may be heard from the depths of the jungle, one often answering another, and never apparently moving far from its accustomed perch. Occasionally a pair might be seen flitting like shadows along the edge of the jungle. On the few occasions I have seen them flying at night, they were always in pairs; but when disturbed in the daytime by a shot fired at some other bird close to their roosting-place, they would fly out singly.”—*C. H. B. G.*

Family FLAMMEIDÆ.

**Flammea flammea novæ-hollandiæ*.

Strix novæ-hollandiæ Stephens; Sharpe, Cat. ii. p. 303 (1875); van Oort, p. 80 (1909).

Three examples of this White-breasted Barn-Owl were obtained at Merauke. In the British Museum there are examples of *Flammea tenebricosa arfaki* (Schleg.) from the Aroa River and the Astrolabe Mts., South-east New Guinea.

It seems to me very doubtful if *Strix arfaki* Schleg. can be upheld as distinct from the Australian form *F. tenebricosa* (Gould) [*cf.* Roths. & Hartert, N. Z. xiv. p. 445 (1907)].

Family FALCONIDÆ.

Astur melanochlamys.

Urospizias melanochlamys Salvad. O. P. i. p. 63 (1880), Aggiunte, p. 21 (1889).

Astur melanochlamys Sharpe in Gould's Birds N. Guinea, i. pl. i. (1886).

Astur melanochlamys schistacinus Roths. & Hartert, xx. p. 482 (1913).

Accipiter melanochlamys & *A. m. schistacinus* Roths. & Hartert, N. Z. xxii. p. 55 (1915).

a. ♂ imm. Camp 9, Utakwa River, 5500 ft., 26th Jan. 1913. [C. B. K.]

This very interesting example of a rare species had attained about half its adult plumage at the time of its death. As the immature plumage appears to be unknown, it may be worth recording.

The head and neck are black, with the basal half of the feathers creamy-white; the maroon collar of the adult is just beginning to appear; half the feathers of the back are dark brown, those of the rump fringed with rufous-chestnut; many of the quills, both of the primaries and secondaries, are brown on the outer web and mostly white tinged with tawny-rufous on the inner web, while both webs have about eight tolerably wide cross-bars of blackish-brown; some of the tail-feathers are similarly coloured, but the ground-colour of the inner web is rather less tawny; the feathers of the fore-neck and sides of the chest are white, blotched with black at the tip, and many of the feathers of the breast and flanks are very similarly marked. The remaining plumage is like that of the adult, except that the new primary quills and tail-feathers are *barred* on the inner web and the maroon breast-feathers are paler and barred with white. In the fully adult bird, of which I have examined three examples, the primaries show no trace of bars on the inner web and the breast-feathers are uniform maroon, not barred with white.

I have examined the type-specimen of *A. m. schistacinus* Roths. & Hartert, kindly lent me, and consider that it does not differ from typical *A. melanochlamys* Salvad., from Arfak. The type of *A. m. schistacinus*, a male from Mount Goliath, and a female from the Angabunga River, both in the Tring Museum, are freshly-moulted, fully mature specimens with a greyish bloom over the black plumage of the crown and back. In this respect they differ from a typical male example of *A. melanochlamys* from Arfak, collected by Dr. Guillemard and figured by Sharpe in Gould's 'Birds of New Guinea' (*op. cit.*). There is,

however, in the British Museum a male from the Aroa River (*E. Weiske*), which agrees entirely with the birds from Arfak, having the upperparts black with scarcely a trace of greyish bloom, and the underparts darker. A close examination of the Arfak male also reveals the fact that it is moulting and that the new feathers on the back are distinctly *greyish*. The darker colour of the underparts is no doubt individual, and is not of subspecific value.

Salvadori's type-specimen, now in the Genoa Museum, is not a fully adult bird. This is evident from the description of it given by Sharpe in Gould's 'Birds of New Guinea,' for he mentions that the quills have the inner webs rather browner *barred with black*, and that the underparts show traces of white bars.

***Astur etorques*.**

Astur etorques (Salvad.); Sharpe, Mitth. Zool. Mus. Dresden, 1878, p. 353, pl. 29.

Urospizias etorques Salvad. O. P. i. p. 49 (1880), Aggiunte, p. 18 (1889).

Astur rufitorques etorques van Oort, p. 56 (1909).

Accipiter hiogaster etorques Roths. & Hartert, N. Z. xxii. p. 53 (1915).

a, b. ♂ et ♀ imm. Mouth of the Mimika River, Feb. 1910 & 10th Dec. 1910. [*W. G.* & No. 99, *C. H. B. G.*]

c. ♂. Parimau, Mimika River, 10th Nov. 1910. [No. 1442, *G. C. S.*]

d. ♂. Iwaka River, 23rd Jan. 1911. [No. 933, *C. H. B. G.*]

e. ♂ [♀] imm. Launch Camp, Setakwa River, 7th Nov. 1912. [*C. B. K.*]

Adult male. Iris bright yellow; orbits lemon-yellow; bill black, gape olive-green, cere chrome-yellow or orange-yellow; feet bright lemon-yellow.

The two female specimens, both in immature plumage, are a valuable addition to the Museum Collection, in which the younger stages, which differ so remarkably from the adult plumage, are poorly represented.

The measurements are as follows :—

Three adult males measure respectively : wing 202, 204, 204 mm.

Two immature females measure respectively : wing 230, 236 mm.

Two adult females from South-east New Guinea measure respectively : wing 257 and 258 mm.

“This Goshawk was rather scarce except in the mountains.”—*C. H. B. G.*

***Astur poliocephalus*.**

Astur poliocephalus Gray ; Sharpe, Cat. i. p. 117 (1874).

Urospizias spilothorax Salvad. Ann. Mus. Civ. Genov. vii. p. 900 (1875).

Urospizias poliocephalus Salvad. Orn. Pap. i. p. 45 (1880), Aggiunte, p. 18 (1889).

Accipiter poliocephalus Roths. & Hartert, N. Z. xxii. p. 52 (1915).

a. ♂. Parimau, Mimika River, 7th Sept. 1910. [No. 155, *C. H. B. G.*]

b. ♀. Canoe Camp, Setakwa River, 23rd Nov. 1912. [*C. B. K.*]

Male. Iris brown ; orbits scarlet ; bill black, cere and gape scarlet ; feet deep orange.

Female. Iris dark brown ; bill black, cere and orbital skin orange ; feet orange ; claws black.

Specimen *a* represents a male of typical *A. poliocephalus* Gray, with the head and mantle much lighter grey than the rest of the upperparts, and the underparts uniform white tinged with grey on the sides of the neck and chest.

Specimen *b* represents a female of typical *A. spilothorax* Salvad., the upperparts being dark ash-grey and the underparts creamy-white inclining to buff on the belly, the breast and sometimes also the belly being streaked with black along the shafts of the feathers.

It is difficult at first sight to believe that birds in this plumage represent a younger stage of *A. poliocephalus* and not a distinct species. The British Museum now possesses a

series of seven males and females of *A. spilothorax*, all practically alike in plumage. None of them are in moult, and there is nothing to suggest any transitional stage between *A. spilothorax* and *A. poliocephalus*. It must, however, be noted that in all the streaked birds there are faint traces of light buff or rufous edges to the feathers of the mantle, and the quills, especially the secondaries, as well as the tail-feathers, have narrow brownish-white margins to the tips, which undoubtedly seem to indicate immaturity. Count Salvadori is therefore no doubt right in his belief that the two forms represent one species. Our specimens can neither prove nor disprove it, but I feel pretty certain that birds in the plumage of *A. spilothorax* are merely immature examples of *A. poliocephalus* in first plumage.

In the first plumage all the feathers of the upperparts have the basal half white: in the second or adult plumage the feathers below the mantle are grey to the base.

The following is a list of the specimens in the British Museum:—

<i>A. poliocephalus</i> Gray.		<i>A. spilothorax</i> Salvad.	
	Wing. mm.		Wing. mm.
♂. Parimau	188	♂. Fergusson Island ..	190
[♂]. Astrolabe Range.....	192	[♂]. Port Moresby	190
[♂]. Arfak Mountains.....	195	[♂]. Owen Stanley Mts...	200
♀. Aru Islands (type)	208	♂. Wedan, B. N. Guinea	195
♀. Bujakori	223	[♂]. Salawatti	199
		♀. Setakwa River	219
		♀. Fergusson Island ..	219

“I saw three examples only of this Grey-and-White Goshawk, all at Parimau, in the depths of the jungle. It is a very shy bird and has a silent flight like that of a Sparrow-Hawk. On one occasion I saw one drop to the ground on some prey, not thirty yards from me, but it came down so lightly that I thought it was merely a bunch of leaves falling from a tree. It was not till I went to investigate that I discovered my mistake, and before I could shoot the bird had slipped round the bole of a great tree and was lost to sight.”—*C. H. B. G.*

****Astur torquatus*.**

Astur torquatus (Temm.) ; Sharpe, Cat. i. p. 125 (1874) ; van Oort, Notes, xxxii. p. 79 (1910).

A male Goshawk from Merauke has been referred to this species found in Timor.

***Accipiter papuanus*.**

Accipiter sp., Ogilvie-Grant, P. & P. p. 292 (1912) ; id. Ibis, 1913, p. 103.

Astur cirrhocephalus papuanus Roths. & Hartert, N. Z. xx. p. 482 (1913) ; xxii. p. 55 (1915).

a. ♂ imm. Mouth of the Mimika River, 12th Dec. 1910. [No. 120, *C. H. B. G.*]

The British Museum contains an adult female of this distinct species of Sparrow-Hawk. Though allied to *A. cirrhocephalus* from Australia, both the adult and the young differ very much in plumage.

The differences in colour and markings between the adults of this species and *A. cirrhocephalus* have already been pointed out, but no mention has been made of any difference in size, though the New Guinea species is very considerably smaller, as will be seen by the table of measurements given below.

In the young of *A. cirrhocephalus* the underparts including the breast, belly, and thighs are broadly barred with reddish-brown, only the throat and fore-neck are longitudinally streaked or spotted along the shafts, while the chest-feathers are rather heavily blotched and barred with brown.

In the young of *A. papuanus* the underparts are streaked with reddish-brown, some of the outer flank-feathers only being barred on the outer web.

Accipiter papuanus.

Specimens in the British Museum.

	Wing. mm.		Wing. mm.
♂ imm. Mimika	183	[♀]. Owen Stanley Moun-	
[♂] imm. Aru Islands	177	tain	212

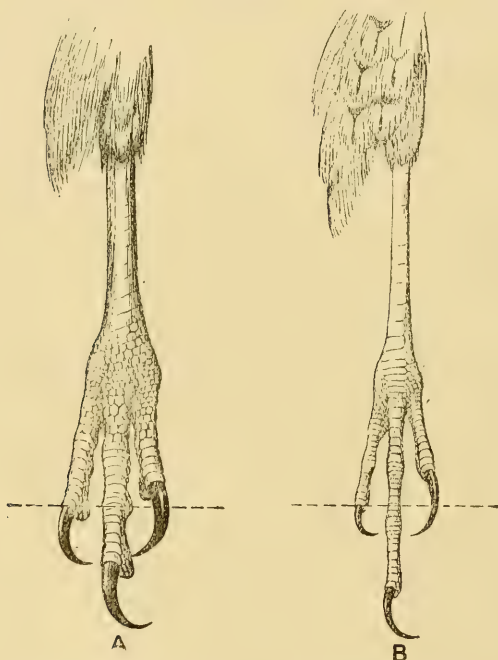
Specimens in the Tring Museum.

	Wing. mm.		Wing. mm.
♂. Aroa River	184	♀. Snow Mountains (type).	212
♂. Milne Bay .. (approx.)	182	♀. Sattelberg.....	219
♂. Mt. Victoria.....	187		

Accipiter cirrhocephalus.

	Wing. mm.		Wing. mm.
9 ♂. Australia	198-210	6 ♀. Australia	225-243

Text-fig. 3.

A. *Astur palumbarius.*B. *Accipiter nisus.*

The adult female in the British Museum was received in 1898, but its distinctive characters must have been overlooked by Sharpe, who registered it as "*Astur* sp."

Those who unite the Sparrow-Hawks with the Goshawks under *Astur* are surely very wrong in doing so. The marked differences in the comparative length and proportions of the toes in the two groups has been so clearly pointed out by Sharpe in the 'Catalogue of the Birds in the British Museum,' i. pp. 93 & 130 (1874), that there should be no difficulty in deciding to which group, *Astur* or *Accipiter*, any species may belong (*cf.* text-fig. 3).

Harpyopsis novæguineæ.

Harpyopsis novæ-guinæe Salvad.; Sharpe, Mitth. Zool. Mus. Dresden, 1878, p. 355, pl. 28; Salvad. O. P. i. p. 40 (1880), iii. p. 507 (1882), Aggiunte, p. 15 (1889); Ogilvie-Grant, P. & P. p. 291 (1912); *id.* Ibis, 1913, p. 102.

a. ♀ imm. Mouth of the Mimika River, 4th Dec. 1910. [No. 51, *C. H. B. G.*]

b. ♂. Canoe Camp, Setakwa River, 14th Nov. 1912. [*C. B. K.*]

Adult male. Iris dark greenish-ochre; orbital skin olive-grey; upper mandible olive-grey, tip pale; lower mandible pale greenish-grey; feet dull lemon.

Adult male. Wing 413 mm.; tail 355; tarsus 111.

Immature female. Wing 440 mm.; tail 380; tarsus 119.

This specimen, though a very large bird, is evidently quite young; some of the quills and tail-feathers still carry downy plumes at the tips of the shafts. Both the inner primary and secondary quills are margined towards the tip with whitish-buff. The middle pair of tail-feathers has been lost, but the outer pairs are much less regularly barred with blackish-brown than in the adult and a large portion of the inner web is mottled with brown and white, the mottling extending nearly to the tips of the feathers.

"The New Guinea Harpy-Eagle was only observed on the coast, where the young female specimen skinned by Chunggat, one of our Dyaks, was secured by a native on the 4th of December, 1910. A pair were seen about the tall casuarina trees, and after several attempts to get near them, I risked a long shot as they were soaring over my head;

unfortunately I failed to bring the bird down, and they were not afterwards seen. This Eagle has a rather loud call; it has a beautiful soaring flight, often in ascending circles.”—*C. H. B. G.*

Hieraëtus weiskei.

Eutolmaëtus weiskei Reichenow, Orn. Monatsb. viii. p. 185 (1900).

Hieraaëtus weiskei Roths. & Hartert, N. Z. xxii. p. 46 (1915).

a. ♂ imm. Camp 6 c, Utakwa River, 5500 ft., 21st Feb. 1913. [*C. B. K.*]

The type-specimen of this small Booted Eagle, an adult female, was procured by Emil Weiske in the Astrolabe Mountains, British New Guinea, at an elevation of 3000 feet. It was described by Dr. Reichenow and subsequently purchased by the British Museum. A second adult specimen in the Museum Collection obtained by A. Goldie in the Choqueri District, Astrolabe Mountains, closely resembles the type-specimen, but is smaller, the wing measuring 298 mm. (=11·7 ins.) as compared with 317 mm. (=12·5 ins.). The sex of this smaller specimen has not been ascertained, but it is no doubt a male.

The young male procured by the Wollaston Expedition is in first plumage, with the downy plumes still adhering to the tips of some of the quills and tail-feathers. It has the general colour of the underparts tawny rufous, somewhat paler on the belly, thighs, and under tail-coverts. The throat, breast, and sides of the body are rather heavily streaked with blackish as in the adult birds, but in these the ground-colour is creamy-white. In the young bird all the ends of the feathers of the top of the head and back of the neck are reddish-brown, or deep tawny-red with dark blackish middles and narrow white tips; the basal half is pure white, as in the adult, but in the latter the ends of the feathers of the crown and nape are blackish-brown. In other respects the young bird resembles the adult, but the sinuation on the edge of the upper mandible is wanting.

Gould's type of *Aquila morphnoides* figured in the 'Birds of Australia,' i. pl. 2, is very similar in general appearance to the bird from the Utakwa River described above, having the same tawny underparts, but with narrower shaft-stripes. Gould states that he shot this bird from a nest containing a single egg, so that it cannot be in quite young plumage.

There are two examples of *H. morphnoides* (Gould) in the British Museum. One, a large bird from Queensland, with the wing measuring 377 mm. (=14.9 ins.) is no doubt a female; the wing of Gould's female type measured 15 inches. The second specimen, a male, from Carnarvon, West Australia, is smaller, the wing measuring 322 mm. (=12.7 ins.). Both these birds, which are fully adult, have the greater part of the under surface creamy-white or pale buff, the sides of the breast and body being partly tawny-rufous and the thighs more faintly mottled with the same colour.

The West Australian bird has been separated by Mr. Mathews as "*Aquila morphnoides coongani*." It is said to differ from the typical form in having the under surface uniform and the shaft-streaks reduced to thin lines, also in its smaller size. No measurements are given. The specimen described is probably an old male example of *H. morphnoides*.

****Haliaëtus leucogaster*.**

Haliaëtus leucogaster (Gmel.); Sharpe, Cat. i. p. 307 (1874).

Cuncuma leucogaster van Oort, p. 56 (1909).

A male was procured at Merauke.

***Haliastur indus girrenera*.**

Haliastur girrenera (Vieill.); Sharpe, Cat. i. p. 315 (1874).

Haliastur indus girrenera Salvad. O. P. i. p. 15 (1880); van Oort, p. 56 (1909).

a, b. ♂ vix ad. et ♀. Mouth of the Mimika River, 10th Dec. 1910, and 14th March, 1911. [Nos. 100, 1152, *C. H. B. G.*]

c. ♂. Parimau, Mimika River, 30th Dec. 1910. [No. 881, *C. H. B. G.*]

Iris dark brown ; orbits pale bluish-slate-colour ; cere and base of the bill pale bluish-slate ; top of the cere and terminal part of the mandibles green or greenish-yellow ; feet pale yellowish-white or dull yellowish.

"The Australian Brahminy Kite was seen on several occasions near the coast, perched in the tall casuarina trees. It was not, however, always easy to approach. On the upper Mimika it was scarce, in fact I only saw the single specimen which was procured. It has a slow, rather laborious flight, and utters a low-pitched cry."—*C. H. B. G.*

Henicopernis longicauda.

Henicopernis longicauda (Garn.) ; *Salvad. O. P.* i. p. 22 (1880), *Aggiunte*, p. 12 (1889) ; *Roths. & Hartert, N. Z.* xx. p. 483 (1913).

a. ♀. Canoe Camp, Setakwa River, 7th Dec. 1912.
[*C. B. K.*]

Iris deep lemon ; cere and bill pale pinkish-lavender, tip and culmen sooty ; feet bluish-white.

Wing 390 mm. ; tail 305.

This fine Pern is a welcome addition to the National Collection, where the species was represented by four examples only, viz. :—

♂ adult. Waigiu. A. R. Wallace Coll.

Immature. S.E. New Guinea. H. O. Forbes Coll.

♀ adult. Milne Bay, S.E. New Guinea. C. Hunstein.

Adult. Whitsunday Passage, Queensland, 4th March, 1872. J. T. Cockerell Coll.

The only other member of this genus is *H. infuscatus* Gurney, from New Britain, of which there is a single example in the British Museum.

♀ immature. New Britain, May 1878. Rev. George Brown Coll.

Baza subcristata reinwardti.

Baza reinwardti (Müll. & Schl.) ; *Sharpe, Cat.* i. p. 358 (1874) ; *Salvad. O. P.* i. p. 26 (1880).

Baza reinwardtii stenozona G. R. Gray; van Oort, p. 56 (1909).

Baza subcristata reinwardti Roths. & Hartert, N. Z. xx. p. 483 (1913); xxii. p. 48 (1915).

Baza subcristata megala Stresemann, N. Z. xx. p. 307 (1913) [Fergusson Is.], xxi. p. 3 (1914) [Goodenough I.]; Roths. & Hartert, N. Z. xxii. p. 49 (1915).

a. ♀ imm. Mouth of the Mimika River, 21st March, 1911. [No. 1225, *C. H. B. G.*]

b. ♂. Wakatimi, Mimika River, 5th Jan. 1911. [No. 219, *C. H. B. G.*]

c. ♀. Upper Mimika River, 21st Feb. 1910. [No. 1081, *G. C. S.*]

d. ♂. Parimau, Mimika River, 31st Aug. 1910. [No. 69, *C. H. B. G.*]

e. ♂. White Water Camp, Kaparé River, 16th Oct. 1910. [No. 317, *C. H. B. G.*]

f. ♂. Wataikwa River, 14th Oct. 1910. [No. 1373, *G. C. S.*]

g-l. ♂ ♀ et ♂ ♀ imm. Launch Camp, Setakwa River, 7th-31st Oct. 1912, and 14th March, 1913. [*C. B. K.*]

m. ♂. Canoe Camp, Setakwa River, 4th Dec. 1912. [*C. B. K.*]

Adult male and female. Iris bright yellow or lemon-yellow; terminal part of upper mandible black, basal portion, cere and lower mandible slate-colour, pale bluish, or lavender-blue; feet bluish-white, bluish-buff, and in one male, buff.

Adult male. Total length in the flesh 406 mm. (=16 inches).

Adult female. Total length in the flesh 400 mm. (=15.75 inches).

In looking over the series of specimens of *Baza reinwardtii* collected by our expeditions and comparing them with those in the British Museum Collection, I have found it necessary to make a careful examination of the allied forms and to refer to the recent work which has been published on them by Mr. E. Stresemann [*cf.* Nov. Zool. xx. p. 305 (1913)]. This appears to me to be unsatisfactory and misleading.

He separates the typical *B. suberistata* from Australia from *B. s. reinwardti* and other allied forms by the colour of the throat and chest, which is said to be paler grey in the former and darker in the latter. This supposed difference does not really exist. The colour of the bands on the under surface is chiefly a matter of age ; in young birds they are dark chestnut or brownish-chestnut, and gradually become black when the fully mature plumage is attained, *i. e.*, when the mantle, scapulars, and often one or two of the innermost secondaries are dark brown, and the rest of the plumage of the upperparts is dark grey. These remarks apply equally to *B. suberistata* and to *B. s. reinwardti*, though some of the younger birds of the latter have the narrow dark bands blackish, even in the first plumage.

Mr. Stresemann has separated the specimens of *Baza* from Fergusson Island as a new subspecies, *B. s. megala*, which is said to be larger than *B. s. reinwardti*. The only example from Fergusson Island in the British Museum is a female collected by A. S. Meek ; it has a wing-measurement of 306 mm. and is clearly marked "female." Mr. Stresemann has, however, entered this individual on his list as a male (see page 307), presumably on account of its size. By altering the sex, as determined by the collector, in the specimens he has listed, Mr. Stresemann has endeavoured to show that the female is always larger than the male. I do not believe this to be the case, and the following measurements of specimens in which the sex has been ascertained by the collector seems to prove clearly that the sexes are practically alike in size.

I have examined the typical examples of *B. s. pallida* Stresemann from Kei and Goram Islands. These have the fore-neck and chest very pale grey, and the bands on the underparts narrower than in *B. s. reinwardti*, from which they are easily distinguished. Another good distinctive character is to be found in the bands on the under surface of the quills, which are much narrower and often incomplete in *B. s. pallida*.

Baza subcristata (Gould).

		mm.	
♂. Queensland	Wing	335	All entered as females by Mr. Stresemann, cf. <i>op. cit.</i> p. 306.
♀. "	"	333	
Ad. "	"	340	
Ad. "	"	333	
Ad. "	"	333	

B. s. reinwardti (Müll. & Schleg.).*(B. s. megala* Stresemann.)

		mm.	
♀. Fergusson Island	Wing	305	Entered as male by Mr. [Stresemann, p. 306.]
Ad. Yule Isl., S.E. New Guinea	"	307	
Ad. Port Moresby	"	320	
Ad. Astrolabe Mountains	"	299	
Ad. " "	"	299	
Ad. N.W. New Guinea	"	295	
♂. Dorey	"	303	
♂. Wakatimi, Mimika River	"	300	
♂. Parimau	"	288	
♂. Kaparé River	"	286	
♂. Wataikwa River	"	289	
♂. Setakwa River	"	300	
♂. " "	"	286	
♀. Mimika River	"	285	
♀. " "	"	285	
♀. Setakwa	"	289	

(B. stenozona Gray.)

		mm.
♀. Aru Islands. (<i>Type</i>)	Wing	290
Ad. Ceram	"	295
Ad. E. Ceram	"	293
♂. Ceram	"	290
♂. " "	"	285
♀. " "	"	297
Ad. Amboina	"	287
♂. " "	"	290
♀. " "	"	300
♀. " "	"	290
♂. Bouru	"	300

"The Cuckoo-Falcon was not a common species. It inhabits the jungle, and may usually be seen sitting solitary on some great tree, but at no great height from the ground. It apparently feeds largely on insects of all kinds."—*C. H. B. G.*

****Hieracidea berigora novæguineæ*.**

Ieracidea berigora novæ-guineæ Meyer ; van Oort, Notes, xxxii. p. 79 (1910).

A specimen is recorded from Merauke and referred with some doubt to *H. b. novæguineæ*, as it appears to differ from the type-specimen from German New Guinea in lacking the bands and spots on the tail, and in having a longer tarsus, as in typical *H. berigora* from Australia.

Family PHALACROCORACIDÆ.

***Phalacrocorax sulcirostris*.**

Phalacrocorax sulcirostris Brandt ; Ogilvie-Grant, Cat. xxvi. p. 376 (1898).

a, b. ♂. Canoe Camp, Setakwa River, 18th Dec. 1912. [*C. B. K.*]

Both specimens are adult males in breeding-plumage with white filo-plumes on the head and neck.

***Phalacrocorax melanoleucus*.**

Phalaerocorax melanoleucus (Vieill.) ; Ogilvie-Grant, Cat. xxvi. p. 398 (1898) ; van Oort, p. 53 (1909).

a. ♂ imm. Wakatimi, Mimika River, 20th Nov. 1910, [No. 1528, *G. C. S.*]

b, c. ♂ ♀ imm. Parimau, Mimika River, 31st Aug. & 7th Dec. 1910. [Nos. 68, 681, *C. H. B. G.*]

d. ♂. Launch Camp, Setakwa River, 13th Oct. 1912. [*C. B. K.*]

e, f. ♂ et ♀ vix ad. Canoe Camp, Setakwa River, 12th Nov. & 27th Dec. 1912. [*C. B. K.*]

Adult male. Iris dark brown ; culmen black ; rest of the bill as well as the orbital and gular skin dull yellow ; feet black.

Immature. Iris pale blue-grey, culmen black, rest of the bill yellow, orbital skin and lores slaty; feet black.

Total length in the flesh 570 mm. ($=22\frac{1}{2}$ inches).

"The Little Pied Cormorant was sparingly seen, always singly, on all the rivers. It is distinctly a river-species, never flying high, but always up or down the course of the river. In general habits, etc. it resembles the other River-Shag (probably *P. sulcirostris*).

"Another large species, dark above and below, was also seen; it was not very plentiful inland, but numbers were seen along the coast. On the Kaparé River in October a pair passed backwards and forwards morning and evening, generally flying high, and in the evening making direct for the large peaks on the Saddle Range. They may have been breeding up there, or may have been merely passing backwards and forwards for feeding purposes."—*C. H. B. G.*]

Family ANATIDÆ.

**Anseranas semipalmata*.

Anseranas semipalmata (Lath.) ; Salvad. Cat, xxvii. p. 44 (1895) ; van Oort, p. 55 (1909).

A young specimen obtained at Merauke is believed to be the first record of the occurrence of this species in New Guinea.

**Nettopus pulchellus*.

Nettopus pulchellus Gmel. ; Salvad. Cat, xxvii. p. 67 (1895) ; van Oort, p. 55 (1909).

Obtained at Merauke.

**Dendrocygna guttata*.

Dendrocygna guttata Schleg. ; Salvad. Cat. xxvii. p. 164 (1895).

Dendrocygna guttulata Salvad. op. cit. pl. i. (1895).

Dendrocygna guttata van Oort, p. 55.

Dendrocygna guttulata Roths. & Hartert, N. Z. xx. p. 481 (1913).

Several were recorded from Merauke.

Tadorna radjah.

Tadorna radjah Garn. ; Salvad. Cat. xxvii. p. 175 (1895); van Oort, p. 55 (1909); Ogilvie-Grant, P. & P. p. 292 (1912); id. Ibis, 1913, p. 103.

a-d. ♂ et ♂ imm. Wakatimi, Mimika River, 10th Jan., 25th Nov. 1910, and 11th March, 1911. [Nos. 1002, 1545, 1546, *G. C. S.*; & 1144, *C. H. B. G.*]

e. ♀. Canoe Camp, Setakwa River, 20th Nov. 1912. [*C. B. K.*]

Adult ♂. Iris white or pale yellowish-white, eyelid pale orange; bill and feet creamy-white tinged with bluish, a black ring round the nasal openings.

Adult ♀. Iris cream-colour; eyelid yellow; bill flesh-colour, bluish-white at the base of the upper mandible; feet fleshy-pink with blue veins.

Immature male. Iris dull buff; bill flesh-colour suffused with pale dull blue; feet pale dull blue.

Adult male. Total length in the flesh 532 mm. (= 21 inches).

Immature males. Total length in the flesh 462–482 mm. (= 18·25–19 inches).

The immature male has the crown of the head dark smoky-grey; the lesser wing-coverts narrowly edged with blackish and the basal portion of the greater wing-coverts black, or mostly black, forming a rather wide irregular band across the wing; in the adult the greater wing-coverts are pure white with a narrow submarginal black band, about 3 mm. wide, forming a clean-cut black band across the wing. The breast-band in the immature bird is blackish freckled with buff, instead of chestnut barred with black as in the adult, and is more or less incomplete in the middle. The more rufous-backed Australian form of this species has been separated by Dr. Hartert as *T. r. rufitergum* [*cf.* N. Z. xii. p. 205 (1905)].

“The White-necked Sheld-Duck was usually seen in pairs, but could not be considered by any means plentiful. It has a straight flight and loud call. Most of those I saw were either on the river banks or perched on some horizontal branch of a low tree near the water’s edge.”—*C. H. B. G.*

Querquedula querquedula.

Anas querquedula Linn. S. N. p. 126 (1758).

Querquedula circia (Linn.); Salvad. Cat. xxvii. p. 293 (1895).

Querquedula discors Ogilvie-Grant (nec Linn.), P. & P. p. 293 (1912); id. Ibis, 1913, p. 103.

a. ♂ imm. Kaparé River, 200 ft., 12th Nov. 1910. [No. 477, C. H. B. G.]

Iris dark brown; bill dark ash-colour slightly spotted on the culmen and at the tip, lower mandible brownish; feet dark ash.

By an unfortunate accident the name *Q. discors* appeared as the scientific name of the Garganey in my Appendix to 'Pygmies and Papuans,' and was afterwards reprinted in the 'Ibis' without correction.

"The Garganey was seen on one occasion only, when a flock of eight passed down the Kaparé River and one was secured."—C. H. B. G.

Family IBIDIDÆ.

Ibis molucca.

Ibis molucca Cuvier; Sharpe, Cat. xxvi. p. 9 (1898).

a-c. ♂ ♀ et ♂ imm. Wakatimi, Mimika River, 20th & 24th Nov. 1910 and 1st March, 1911. [Nos. 1527, 1542, G. C. S.; & 1059, C. H. B. G.]

d, e. ♂ ♀ imm. Launch Camp, Setakwa River, 16th Oct. & 3rd Nov. 1912. [C. B. K.]

Adult male and female. Iris dark brown, sclerotic portion of the eye red; bill black; naked skin on the head and neck black with slashes of pink on the back of the head and neck; bare skin on the sides of the breast dull crimson; feet magenta, tarsus coral-red.

Total length in the flesh ♂, 775 mm. ($= 31\frac{1}{2}$ inches), ♀ 685 mm. ($= 27$ inches).

Immature male. Iris dark brown; bill and bare skin on the head black; feet dark ash-colour, or pink above, shading into lavender-grey on the toes.

The length of the bill, on which Mr. Mathews has distinguished two subspecies in Australia, is a sexual character [*cf.* Birds Austr. iii. p. 384 (1914)]:—

♂ adult.	Bill 167 mm.
♂ imm.	„ 171, 172 mm.
♀ adult.	„ 129 mm.
♀ imm.	„ 103 mm.

Family ARDEIDÆ.

**Notophox picata*.

Notophox picata (Gould); Sharpe, Cat. xxvi. p. 112 (1898); van Oort, p. 53 (1909).

Obtained at Merauke.

N. aruensis Gray is said to be the immature of *N. picata*, but this has been denied by Sharpe (*op. cit.* p. 113).

Egretta alba timoriensis.

Herodias timoriensis (Lesson); Sharpe, Cat. xxvi. pp. 98, 270 (1898).

Herodias alba timoriensis van Oort, p. 53 (1909).

a. ♀ imm. Kamura River, 17th May, 1910. [No. 1153, *G. C. S.*]

b. ♂ imm. Launch Camp, Setakwa River, 4th Oct. 1912. [*C. B. K.*]

c. Ad. (in full breeding-plumage). Canoe Camp, Setakwa River, 14th Nov. 1912. [*C. B. K.*]

a. Total length in the flesh 92 cm. ($33\frac{1}{4}$ inches); wing 318 mm.; tarsus 138. Iris pale lemon; bill dull orange; lores dull greenish; legs dusky black.

b. Wing 365 mm.; tarsus 165. Iris lemon; facial skin yellowish-green; bill gamboge-yellow; feet black.

c. Wing 368 mm.; tarsus 162. Iris pale yellow; orbital skin greenish; bill deep ochre; feet black, back of the legs yellowish-green. This bird is in full breeding-plumage. The train extends 76 mm. beyond the end of the tail.

Some interesting notes on the colour of the bill in Australian examples of the Great White Heron, supplied by Messrs. Mattingley and Cole [*cf.* Mathew's Birds Austral. iii. pp. 432-4 (1914)], show that birds in breeding-plumage may

have the bill black, yellow tipped with black, or yellow. It may be that *E. a. timoriensis* has the bill black in the breeding-season in very old birds ; but the evidence afforded by the specimens detailed above does not support this view, but agrees with Sharpe's conclusions in the 'Catalogue' (*op. cit.*), specimen *c*, a bird in full breeding-plumage, having the bill uniform deep ochre. According to Mr. Cole's observations on Australian birds, the change from a yellow to a black bill takes place slowly, commencing at the end of December.

"The eastern form of the large White Heron was seen in small numbers on all the rivers. It was very shy, and was fond of perching on some conspicuous tree-top where to approach within shot was out of the question. Both in flight and habits it resembles the other Egrets."—*C. H. B. G.*

Nycticorax caledonicus.

Nycticorax caledonicus (Gmel.) ; Sharpe, Cat. xxvi. p. 158 (1898) ; van Oort, p. 54 (1909).

a. ♂. Parimau, Mimika River, 12th Nov. 1910. [No. 1498, *G. C. S.*].

Iris deep yellow ; eyelid, orbital skin, and skin at the base of mandible yellowish-green ; bill black, a narrow irregular line on the upper mandible and the basal part of the lower mandible green ; feet pale dusky ochre-yellow.

Total length in the flesh 625 mm. (=25 inches). Wing 290 mm.

A fine adult with the white occipital plumes partially grown.

Butorides stagnatilis.

Butorides stagnatilis (Gould) ; Sharpe, Cat. xxvi. p. 183 (1898).

Butorides javanica stagnatilis van Oort, p. 54 (1909).

a. ♂. Launch Camp, Setakwa River, 16th Oct. 1912. [*C. B. K.*]

Iris brown ; orbital skin greenish-yellow ; bill black, lighter at the base ; feet brownish-yellow.

This is a fine adult specimen in full plumage, with the whole of the underparts including the sides of the head and

sides of the neck suffused with dark brownish-buff inclining to vinaceous on the breast and to snuff-brown on the sides of the head and belly ; some of the long feathers on the sides of the breast have grey tips. The bird agrees perfectly with typical examples of *B. stagnatilis* from North Australia.

The specimen figured and described as *Butorides stagnatilis* by Mr. Mathews [*cf.* *Birds Austr.* iii. p. 466, pl. 194 (1914)] is evidently not of that species, but appears to be typical *B. javanica* Horsf. or possibly *B. j. amurensis* Schrenck, if the latter is really separable as a subspecies from *B. javanica* (type from Java), which I greatly doubt. In any case, the supposed larger size of the bill does not seem to afford a distinctive character.

***Tigrisoma heliosylus*.**

Zonerodius heliosylus (Lesson) ; Sharpe, *Cat.* xxvi. p. 192 (1898) ; van Oort, p. 55 (1909).

a-d. ♂ ♀. Parimau, Mimika River, 15th Sept.—16th Dec. 1910. [Nos. 198, 274, 680, 748, *C. H. B. G.*]

e, f. ♂. Launch Camp, Setakwa River, 2nd Oct. 1912 & 15th March, 1913. [*C. B. K.*]

g, h. ♂. Canoe Camp, Setakwa River, 25th Nov. 1912 & 5th March, 1913. [*C. B. K.*]

Male. Iris yellow ; orbital skin, lores, cheeks, and chin-spot sulphur-yellow ; bill pale slate-colour, culmen and tip black ; feet lemon-yellow, front of the tarsus dusky.

Female. Iris yellow ; orbital skin and lores greenish-yellow ; upper mandible black, cutting-edge and lower mandible greenish-pearl, base of the lower mandible grass-green ; legs greenish-lemon.

Males usually have the bands on the upperparts wider and more rufous in colour than the females ; the bands, too, on the middle tail-feathers are wider.

“This Tiger-Bittern was occasionally seen, sometimes in pairs, sometimes singly, on the streams and swamp-waters in the depths of the jungle. On being disturbed it would leave some sheltered position under the overhanging brush-wood or shrubs at the edge of the water,”—*C. H. B. G.*

Dupetor flavicollis gouldi.

Dupetor gouldi (Bonap.) ; Sharpe, Cat. xxvi. p. 249 (1898).

Dupetor flavicollis gouldi van Oort, p. 54 (1909) ; id. Notes, xxxii. p. 79 (1910) ; Roths. & Hartert, N. Z. xx. p. 481 (1913) ; Mathews, Birds Austr. iii. p. 479, pl. 198 (1914).

a. ♀. Mouth of the Mimika River, 16th Dec. 1910. [No. 154, *C. H. B. G.*]

b. ♂. Parimau, Mimika River, 29th Aug. 1910. [No. 37, *C. H. B. G.*]

c. ♀. Canoe Camp, Setakwa River, 5th Dec. 1912. [*C. B. K.*]

Iris pale yellow ; orbital skin dusky ; upper mandible brownish-black, lower mandible greenish-horn-colour ; feet dusky.

None of these birds appear to be fully adult. All have the underparts dark greyish-brown with smoky or pale buff fringes to the feathers of the belly. In specimen *a*, the least wing-coverts have buff margins, but in *b* and *c* there is only a trace of these, the pale edges of the feathers having been nearly worn off, especially in *c*.

“The Yellow-necked Bittern was very scarce up the rivers, but several were observed near the coast. It might be seen standing by the edge of the water or perched on some low branch of the mangrove trees. When alarmed it has a peculiar habit of raising its crest and, at the same time, uttering a hoarse note.”—*C. H. B. G.*

Family **ÆDICNEMIDÆ.****Esacus magnirostris.**

Orthorhamphus magnirostris (Vieill.) ; Sharpe, Cat. xxiv. p. 22 (1896).

a, b. ♂. Mouth of the Mimika River, 14th & 25th March, 1911. [Nos. 1151, 1286, *C. H. B. G.*]

Iris yellow ; eyelid greenish ; bill black, dirty yellow at the base ; feet yellowish-stone-colour.

“Only two examples of the Australian Thick-knee were met with. They were exceedingly wild and difficult to

approach. The first specimen I secured was followed for a mile and a half over the extensive sand-flats, and it was not until it ran among the masses of dead and fallen trees that I was able to get anywhere near it. The other bird, after being followed for a considerable time, squatted behind a piece of driftwood near the edge of the sea, and by approaching it in decreasing circles I was at last able to get within shot."—*C. H. B. G.*

Family PARRIDÆ.

Hydralector gallinaceus.

Hydralector gallinaceus (Temm.) ; Sharpe, Cat. xxiv. p. 79 (1896); van Oort, p. 60 (1909); Mathews, Birds Austr. iii, p. 316 (1913).

a. ♂ imm. Launch Camp, Setakwa River, 13th Oct, 1912. [*C. B. K.*]

Iris brownish-white ; bill, basal half pale yellow, terminal half black; frontal lappet pale waxy-yellow; feet plumbeous-black.

This immature bird, which still retains some chestnut feathers on the crown and a few pale sandy-buff and black feathers on the breast, seems to be referable to typical *H. gallinaceus* from Celebes, and not to *H. g. novæ-guinææ* Ramsay, from South-east New Guinea. Dr. Lorentz procured three adult specimens at Merauke which have been referred to the Celebean form by Dr. van Oort.

In the immature bird from the Setakwa River the black of the upperparts is confined to the crown, nape and mantle, and the back and wings are bronze-brown.

The form inhabiting South-east New Guinea, *H. g. novæ-guinææ*, is a very dark bird and has the upperparts almost entirely black in the fully adult, only the inner parts of the wings and scapulars being very dark greenish-bronze. In Eastern Australia *H. g. novæ-hollandiæ* Salvad. occurs, and is said to be paler than the Celebean bird. This is perhaps a recognisable form, but it is difficult to see how *H. g. rothschildi* (Mathews) from North-west Australia, which "differs

from *H. g. novæ-hollandiæ* in being darker above," can be maintained as distinct from the typical Celebean form. Mr. Mathews says the colour of the tail is a good character for separating the two, but I fail to find any difference whatever in this respect. Sharpe included the Australian birds with *H. gallinaceus* from Celebes, but in the latter the black on the neck usually encroaches somewhat farther over the mantle, and the bronze-brown of the head and wings is, generally speaking, rather darker. It must, however, be remarked that the Australian birds in the British Museum are nearly all in somewhat worn plumage, whereas those from Celebes are in fresh or nearly fresh plumage. I am by no means convinced that Sharpe was not right in uniting the Australian birds with the Celebean.

Family GLAREOLIDÆ.

**Stiltia isabella*.

Stiltia isabella (Vieill.) ; Sharpe, Cat. xxiv. p. 51 (1896) ; van Oort, p. 60 (1909).

This Pratincole was obtained at Merauke.

Family CHARADRIIDÆ.

Charadrius dominicus fulvus.

Charadrius dominicus Müll. ; Sharpe, Cat. xxiv. p. 195 (1896).

Charadrius dominicus fulvus Gmel. ; van Oort, p. 58 (1909).

a. ♀. Mouth of the Mimika River, 28th Nov. 1910. [No. 4, *C. H. B. G.*]

b. ♀ imm. Launch Camp, Setakwa River, 13th March, 1913. [*C. B. K.*]

These birds both belong to the smaller race ; they measure :—

a. Wing 163 mm. (=6·4 ins.).

b. „ 167 „ (=6·55 ins.).

“The eastern form of the Smaller Golden Plover was

tolerably plentiful on the sand-flats on the coast, but very wild and very difficult to shoot. The call is a clear whistle, and the flight is swift and close over the surface of the ground."—*C. H. B. G.*

****Lobivanellus miles*.**

Lobivanellus miles (Bodd.); Sharpe, Cat. xxiv. p. 140 (1896); van Oort, p. 58 (1909).

This Wattled Plover was obtained at Merauke.

***Ægialitis geoffroyi*.**

Ochthodromus geoffroyi (Wagl.); Sharpe, Cat. xxiv. p. 217 (1896); van Oort, p. 58 (1909).

a-l. ♂ ♀ & ♀ imm. Mouth of the Mimika River, 14th Nov.–13th Dec. 1910, and 16th–22nd March, 1911. [Nos. 15, 17, 55, 83, 109, 122, 1179, 1180, 1196, 1239, 1241, *C. H. B. G.*]

One specimen, No. 1196, is in nearly full breeding-plumage. The soft-parts are similar to those of a bird killed on the same date which is still in winter plumage. Iris dark brown; bill black; feet dark ash-colour.

"This Sand-Plover was very numerous on the sand-flats along the coast. At high tide the flocks would come and rest on a little spit of sand either within a few yards of where my camp was pitched, or near the small Papuan village on the same spit. In habits it resembles other species of Ringed Plovers."—*C. H. B. G.*

***Ægialitis mongolus*.**

Ochthodromus mongolus (Pall.); Sharpe, Cat. xxiv. p. 223 (1896).

a. ♀. Mouth of the Mimika River, 4th Dec. 1910. [No. 52, *C. H. B. G.*]

The specimen has a narrow ashy-brown band extending across the fore-neck. Sharpe considered that the presence of this band was a sign of age and was only present in very old birds. Culmen 19 mm. (=·76 in.); wing 139 mm. (=5·5 ins.)

**Ægialitis dubius*.

Ægialitis dubius (Scop.) ; Sharpe, Cat. xxiv. pp. 263, 744 (1896) [part.].

Ægialites dubius jerdoni Legge ; van Oort, p. 58 (1909).

Charadrius dubius Roths. & Hartert, N. Z. xx. p. 482 (1913).

Dr. van Oort points out that specimens of the Little Ringed Plover obtained on the Noord River agree with the description given by Legge of typical examples of *Æ. jerdoni* from Ceylon, and he upholds the distinction between the eastern and western forms of *Æ. dubius*. Mr. Lorentz found this bird breeding and obtained a pair with their young. The wing-measurement of the male is given as 112 mm. (=4.4 ins.) and the female as 109 (=4.3 ins.). In typical males of *Æ. jerdoni* from Ceylon the wing-measurement is 102 mm. (=4.0 ins.).

**Himantopus leucocephalus*.

Himantopus leucocephalus Gould ; Sharpe, Cat. xxiv. p. 317 (1896); van Oort, p. 59 (1909).

The Australian Stilt was obtained at Merauke.

Numenius cyanopus.

Numenius cyanopus Vieill.; Sharpe, Cat. xxiv. p. 350 (1896).

Numenius arquata cyanopus van Oort, p. 60 (1909).

a. ♂. Mouth of the Mimika River, 18th March, 1911. [No. 1193, *C. H. B. G.*]

Iris brown ; bill blackish-horn-colour, basal half of the lower mandible flesh-colour ; feet deep ashy-grey.

“Small flocks of the Australian Curlew, numbering from six to eight birds, used to pass along the sea-front at the turning of the tide, but they always kept well out of shot. Occasionally a single bird would pitch on the sand-flats, but though I stalked many of them I was only able by a very long shot to secure a specimen. They had a clear whistle of seven syllables, and both in their call and flight resembled *N. phaeopus*.”—*C. H. B. G.*

**Numenius phaeopus variegatus*.

Numenius phaeopus variegatus (Scop.); Sharpe, Cat. xxiv. p. 361 (1896); van Oort, p. 60 (1909).

This eastern form of the Whimbrel was met with at Merauke.

"On the lower reaches of the Mimika below Wakatimi many Whimbrels were seen on the mud-banks and at the edge of the mangrove-swamps, but all were very wild, and the only one shot was not secured."—*C. H. B. G.*

Totanus hypoleucus.

Tringoides hypoleucus (Linn.); Sharpe, Cat. xxiv. p. 456 (1896).

Tringa hypoleuca Roths. & Hartert, N. Z. xx. p. 482 (1913).

a, b. ♀ et ♀ imm. Mouth of the Mimika River, 16th Dec. 1910 & 14th March, 1911. [Nos. 156, 1162, *C. H. B. G.*]

c, d. ♂. Wakatimi, Mimika River, 22nd Nov. 1910. [Nos. 1540, 1541, *G. C. S.*]

e, f. ♂ ♀ imm. Parimau, Mimika River, 29th Nov. 1910 & 5th Jan. 1911. [Nos. 615, 883, *C. H. B. G.*]

g. ♂. Canoe Camp, Setakwa River, 19th Nov. 1912. [*C. B. K.*]

"The Common Sandpiper was constantly observed on the coast. It was very tame, and would usually run away in front of one at a distance of a few feet only. Inland only a few were seen, three or four at Parimau and one at the Iwaka River."—*C. H. B. G.*

Totanus glareola.

Rhyacophilus glareola (Linn.); Sharpe, Cat. xxiv. pp. 491, 764 (1896).

a, b. ♀. Wakatimi, Mimika River, 22nd & 23rd Aug. 1910. [Nos. 2 & 17, *C. H. B. G.*]

Iris hazel; bill ashy, dark at the tip; feet greenish-ochre.

"Wood-Sandpipers were sparingly observed in August at Wakatimi, where they were flushed from the swampy holes in the clearing at the back of the camp."—*C. H. B. G.*

***Totanus nebularius.**

Glottis nebularius (Gunner); Sharpe, Cat. xxiv. p. 481 (1896).

Glottis littorea (Linn.); van Oort, p. 59 (1909).

A Greenshank in winter dress was obtained at Meranke.

Terekia cinerea.

Terekia cinerea (Güldenst.); Sharpe, Cat. xxiv. p. 474 (1896); van Oort, p. 59 (1909).

a-d. ♂ ♀. Mouth of the Mimika River, 12th Dec. 1910 and 18th & 22nd March, 1911. [Nos. 130, *G. C. S.*, & 1195, 1240, 1242, *C. H. B. G.*]

Iris dark brown; bill black, dull yellow at the base; feet rich yellow-ochre, joints dusky.

The birds killed in December and March, but especially in the latter month, are in moult, the quills and tail-feathers are being replaced and the new feathers of the upper tail-coverts and lower back are grey with a submarginal dusky band and white margin. This is not a winter-plumage, as described by Sharpe (*op. cit.*), but a breeding-plumage.

"The Terek Sandpiper was common in flocks of from twenty to thirty individuals. It is an extremely active bird, running and feeding with quick movements. It was only observed on the coast near the water's edge, and was very wild, taking flight at the least alarm."—*C. H. B. G.*

Tringa acuminata.

Heteropygia acuminata (Horsf.); Sharpe, Cat. xxiv. p. 566 (1896); van Oort, p. 59 (1909).

Erolia maculata acuminata Roths. & Hartert, N.Z. xx. p. 482 (1913).

a, b. ♀ imm. Launch Camp, Setakwa River, 17th & 19th Oct. 1912. [*C. B. K.*]

The Siberian Pectoral Sandpiper was also met with by A. S. Meek on the Setakwa River in November.

Tringa minuta ruficollis.

Limonites ruficollis (Pall.); Sharpe, Cat. xxiv. p. 545 (1896).

Leimonites minutus ruficollis van Oort, p. 59 (1909).

a-e. ♂ ♀. Mouth of the Mimika River, 13th-16th Dec. 1910. [Nos. 108, 110, 112, 149, 155, *C. H. B. G.*]

"The eastern form of the Little Stint was observed commonly in small flocks, both on the sand-flats along the coast and on the mud-banks at low water a mile or so up the Mimika River."—*C. H. B. G.*

Gallinago megala.

Gallinago megala Swinh.; Sharpe, Cat. xxiv. p. 624 (1896).

a. ♂. Launch Camp, Setakwa River, 2nd Oct. 1912. [*C. B. K.*]

Bill, tip black, remainder fleshy-olive; feet plumbeous-olive.

Family LARIDÆ.

***Hydrochelidon hybrida.**

Hydrochelidon hybrida Pall.; Saunders, Cat. xxv. p. 10 (1896); van Oort, p. 61 (1909).

The Whiskered Tern was obtained near Merauke.

***Gelocheidon anglica.**

Gelocheidon anglica (Montagu); Saunders, Cat. xxv. p. 25 (1896).

Gelocheidon nilotica (Hasselq.); van Oort, p. 61 (1909).

The Gull-billed Tern was met with at Merauke in November.

Sterna bergii.

Sterna bergii Licht.; Saunders, Cat. xxv. p. 89 (1896).

a, b. ♂ et ♀ imm. Mouth of the Mimika River, 15th Dec. 1910. [Nos. 141, 145, *C. H. B. G.*]

"Flocks of the Large Crested Tern frequented the extensive sand-flats at the mouth of the Mimika River, and were either seen resting or hawking over the sea just outside the breakers. It was a very shy species, and practically unapproachable. It has a loud call."—*C. H. B. G.*

****Sterna dougalli*.**

Sterna dougalli Montagu ; Saunders, Cat. xxv. p. 70 (1896) ; van Oort, p. 61 (1909).

An adult Rosy Tern in breeding-plumage was obtained near Merauke.

***Sterna sinensis*.**

Sterna sinensis Gmel. ; Saunders, Cat. xxv. p. 113 (1896).

a-d. ♂ ♀ vix ad. et ♂ imm. Mouth of the Mimika River, 2nd Dec. 1910, and 20th & 21st March, 1911. [Nos. 28, 1203, 1224, 1226, *C. H. B. G.*]

♂ *vix ad.* Iris dark brown ; eyelid black ; bill lemon-yellow, tip black ; feet gamboge.

♀ *vix ad.* Iris dark brown ; bill greenish-yellow, tip and nostrils black ; feet horn-colour.

"This eastern form of the Little Tern was a tolerably common bird, and usually seen singly. At high water it entered the river-mouth and fished up the lower reaches, and it was there that we obtained specimens. Its cry is very similar to that of the European Little Tern, and when fishing its habits are very similar, as it hovers over a shoal of fish and falls directly on to its prey."—*C. H. B. G.*

Family PODICIPEDIDÆ.

****Podiceps novæhollandiæ*.**

Podiceps novæhollandiæ Steph. ; Ogilvie-Grant, Cat. xxvi. p. 519 (1898).

Podiceps fluvialis novæhollandiæ van Oort, p. 52 (1909).

Obtained at Merauke.

Family RALLIDÆ.

****Hypotaenidia philippensis*.**

Hypotaenidia philippensis (Linn.) ; Sharpe, Cat. xxiii. p. 39 (1894) ; van Oort, p. 57 (1909).

Adult examples of this Rail were obtained at Merauke.

****Gymnocrex plumbeiventris*.**

Gymnocrex plumbeiventris (Gray) ; Sharpe, Cat. xxiii. p. 52 (1894) ; Roths. & Hartert, N. Z. xx. p. 481 (1913).

A nearly adult male from the Setakwa River.

***Megacrex inepta*.**

Megacrex inepta D'Alb. & Salvad. ; Sharpe, Cat. xxiii. p. 63 (1894) ; Gould, Birds New Guinea, v. pl. 69 (1880) ; Ogilvie-Grant, Bull. B. O. C. xxxi. p. 103 (1913).

a-f. ♂ ♀ et ♂ juv. Launch Camp, Setakwa River, 31st Oct., 7th Nov. 1912, and 16th March, 1913. [*C. B. K.*]

Iris red-brown ; bill apple-green washed with blackish ; feet black.

This large flightless Rail was one of the most important species procured by Mr. Wollaston's expedition. Though described in 1879, it was not represented in the National Collection, and the series, which includes a half-grown young bird, is therefore an extremely welcome addition. D'Albertis discovered it near the Fly River, where it inhabited ditches still containing water during the dry season. He notes that, though incapable of flight, it could run swiftly. Its remarkable resemblance in coloration to the members of the South-American genus *Aramides* has already been remarked on, but it is a much more massively built bird than any member of that group, both the bill and legs being extremely stout.

The half-grown male in first plumage differs from the adult, which has been figured by Gould (*op. cit.*), in having the crown of the head covered with hairy plumes of a brownish-black colour, while lines of similar plumes form a longitudinal pattern on the greyish sides of the head and white throat. The mantle is browner than in any of the adult birds procured.

The colour of the mantle varies a good deal among the adult birds. Two males are olive-brown washed with greyish, tinged here and there with pale cinnamon. Of three females one is similarly coloured to the males just mentioned,

while two have the mantle much greyer, one especially so—in fact, the mantle in that bird might aptly be described as uniform dark grey. The measurements agree with those given by Count Salvadori.

Rallina tricolor.

Rallina tricolor Gray; Sharpe, Cat. xxiii. p. 79 (1894); Ogilvie-Grant, P. & P. p. 293 (1912); id. Ibis, 1913, p. 104.

a. ♂. Wakatimi, Mimika River, 24th Dec. 1910. [No. 172, *C. H. B. G.*]

b-d. ♂ ♀. Launch Camp, Setakwa River, 2nd Oct. 1912, 24th & 30th March, 1913. [*C. B. K.*]

Iris crimson; bill apple-green; feet olive.

The Australian form has been separated as *R. t. robinsoni* by Mr. Mathews, and, having a smaller bill and browner back, is fairly distinguishable. I have seen one typical example of *R. tricolor* from the Aru Islands, and am unable to see in what way it differs from New Guinea specimens. Mr. Mathews does not explain, but he has separated birds from the last-named locality as *Eulabeornis tricolor grayi*. The type of *R. tricolor*, described by G. R. Gray from a specimen obtained by Wallace in the Aru Islands, is not in the British Museum. Sharpe does not allude to it in the list of specimens given in the 'Catalogue,' the only example from the Wallace Collection being specimen "l," a male from Dorei. In his description, however, he wrote: "*Adult male* (type of the species)." This was clearly a mistake on Sharpe's part, for the bird described was that from Dorei already alluded to. This is proved by a note in Sharpe's writing on the reverse of the label: "Descr. Cat. B." Further, Gray's type-specimen from Aru was a *female*. What has become of this specimen I am unable to say. Gray stated (P. Z. S. 1858, p. 188) that it was "in Mr. Wallace's Collection." In the British Museum there is one nearly adult specimen from Aru, procured by Mr. W. Goodfellow in 1904. This bird cannot be separated from the series listed above or from other examples from New

Guinea. In the Tring Museum there is one bird, said to be from the Aru Islands, purchased of Whiteley.

For the present, therefore, I retain the name *R. tricolor* for the New Guinea specimens.

The four birds collected by our expeditions vary very much *inter se* :—

	<i>Culmen from feathers on forehead.</i>	<i>Barring on underparts.</i>
<i>b.</i> ♂ (old).	Very large: 35 mm.	Strongly marked: bands <i>white</i> .
<i>c.</i> ♂ (? younger).	31 mm.	Sparingly marked, mostly on the middle of the belly, with very narrow whitish-buff bands.
<i>a.</i> ♂ (adult).	30 mm.	Not strongly marked, and mostly buff; a few of the feathers with a white band on the basal half.
<i>d.</i> ♀ (adult).	31 mm.	Well-marked and mostly buff; a few of the feathers with a white band on the basal half.

Specimens in the British Museum :—

♂ (? younger). Dorei.	30 mm.	Sparingly marked, mostly on the middle of the belly, with narrow whitish and buff bars.
A. R. Wallace,		
Adult. Pt. Moresby.	31 mm.	Strongly marked: bands <i>white</i> .
A. Goldie.		
Younger. Silbattabatta,	32 mm.	Marked with pale rufous-buff bars, and closely resembling the bird from Dorei.
Aru Is. W. Goodfellow.		
Young. Humboldt Bay.	27 mm.	Marked with pale rufous-buff bars.
W. Goodfellow.		

Rallicula klossi. (Pl. VII.)

Rallicula klossi Ogilvie-Grant, Bull. B. O. C. xxxi. p. 104 (1913).

a. ♀. Camp 6 B, Utaqua River, 4200 ft., 24th Jan. 1913. [C. B. K.] (*Type of the female.*)

b, c. ♂ et ♂ juv. Camp 9, Utaqua River, 5500 ft., 30th Jan. & 1st Feb. 1913. [C. B. K.] (*Type of the male.*)

The *male* of this species differs from the male of *R. forbesi* Sharpe, from British New Guinea, in having the mantle, wing-coverts, and scapulars dark chestnut instead of black. Total length about 190 mm.; wing 89; tail 51; tarsus 38.

2



MENPES PRESS, WATFORD.

RALLICULA KLOSSI. 1. ♂ 2. ♀

The *female* differs from the female of *R. forbesi* in having the buff spots on the black mantle much smaller and more numerous; the rump is similarly marked, whereas in *R. forbesi* it is sooty-brown and unspotted. Wing 86 mm.

A quite young male has the general plumage black; most of the feathers of the crown with the basal half barred with chestnut; a few chestnut feathers on the sides of the chest; the upper tail-coverts chestnut barred with blackish and the tail-feathers (partially grown) dark chestnut.

Unfortunately there are no field-notes accompanying these interesting specimens, and even the colours of the soft-parts have not been recorded by Chungkat, the Dyak who collected them.

The specimens figured are the ♂ & ♀ types of the species.

***Amaurornis moluccana*.**

Amaurornis moluccana (Wallace); Sharpe, Cat. xxiii. p. 153 (1894).

a. ♀ imm. Canoe Camp, Setakwa River, 15th Nov. 1912.
[C. B. K.]

Iris brown; upper mandible blackish, lower mandible greenish-grey; feet dull yellow, shading to olive-brown.

This bird appears to be referable to *A. moluccana*, and is almost certainly a bird in first plumage. The throat is white, and the tail-feathers, which are black and pointed with naked shafts protruding beyond the vanes, have the appearance of being worn first plumage. The wing, though fully grown, is short and measures 129 mm., and the feathers are comparatively feeble with rather soft shafts. In the adult of *A. moluccana* the wing is considerably longer, about 145 mm., and the quills are much stiffer.

Family COLUMBIDÆ.

***Ptilonopus superbus*.**

Ptilopus superbus (Temm.); Salvad. Cat. xxi. p. 112 (1893).

Ptilinopus superbus van Oort, p. 65 (1909); Roths. & Hartert, N. Z. xx. p. 477 (1913).

a, b. ♂. Mimika River, 22nd Feb. & 1st May, 1910. [Nos. 1084, 1146, *G. C. S.*]

c-g. ♂ ♀. Parimau, Mimika River, 16th Sept.-9th Dec. 1910, & 3rd Jan. 1911. [Nos. 200, 635, 641, 699, *C. H. B. G.*]

h. ♂. Kaparé River, 28th Oct. 1910. [No. 388, *C. H. B. G.*]

i. ♂. Iwaka River, 23rd Jan. 1911. [No. 900, *C. H. B. G.*]

k, l. ♂ ♀. Launch Camp, Setakwa River, 22nd Oct. 1912, & 29th March, 1913. [*A. F. R. W. & C. B. K.*]

m. ♂. Canoe Camp, Setakwa River, 10th Dec. 1912. [*C. B. K.*]

n. ♀. Camp 3, Utakwa River, 20th Dec. 1912. [*C. B. K.*]

Iris golden-green or lemon-yellow; orbital skin olive-green; legs crimson.

"This Fruit-Pigeon was by no means a common species, and very few were procured or seen. Its habits are similar to those of *P. pulchellus*, but we were unable to ascertain whether it has a distinct call."—*C. H. B. G.*

***Ptilonopus pulchellus*.**

Ptilopus pulchellus (Temm.); *Salvad. Cat.* xxi. p. 117 (1893).

Ptilinopus pulchellus van Oort, p. 64 (1909); *Roths. & Hartert, N. Z.* xx. p. 477 (1913).

a, b. ♂. Wakatimi, Mimika River, 1st & 8th Mar. 1911. [Nos. 1058, 1124, *C. H. B. G.*]

c-e. ♂. Upper Mimika River, 10th & 12th Feb. 1910. [Nos. 1041, 1042, 1052, *G. C. S.*]

f-g. ♂ ♀. Parimau, Mimika River, 30th Aug.-19th Dec. 1910. [Nos. 51, 52, 89, 90, 134, 267, 268, 283, 284, 503, 507, 565, 578, 582, 644, 664, 745, 776*, *C. H. B. G.*; 1486, *G. C. S.*]

z. ♂. White Water Camp, Kaparé River, 1500 ft., 8th Nov. 1910. [No. 453, *C. H. B. G.*]

a', b'. ♂ ♀. Tuaba River, 1st Nov. 1910. [Nos. 1466, 1467, *G. C. S.*]

* With nest and one egg.

c', d'. ♂ ♀. Wataikwa River, 25th & 31st Oct. 1910.
[Nos. 1435, 1464, *G. C. S.*]

e'. ♂. Iwaka River, 2nd Feb. 1911. [No. 983, *C. H. B. G.*]

f', g'. ♂. Launch Camp, Setakwa River, 10th & 16th March 1913. [*C. B. K.*]

h'. ♂. Canoe Camp, Setakwa River, 19th Nov. 1912.
[*C. B. K.*]

i'. Ad. Camp 3, Utakwa River, 2500 ft., 22nd Dec. 1912.
[*C. B. K.*]

Iris orange, paler round the pupil; orbital skin yellowish; bill greenish-yellow; feet carmine or pinkish-magenta.

Two eggs of this species were procured: one at Parimau on the 19th of December, 1910, with specimen No. 776, and one at Launch Camp, on the 17th of March, 1913. They are white, and of a rather long oval shape. They measure respectively 27×18.5 and 29×19 mm.

"This was quite the commonest Fruit-Pigeon throughout the country traversed, and was usually observed in pairs. The nests seen were all mere platforms of sticks placed on any convenient situation, but never many feet above the ground. It has a low call, and is a very tame and confiding species."—*C. H. B. G.*

***Ptilonopus coronulatus*.**

Ptilopus coronulatus Gray; *Salvad. Cat.* xxi. p. 118 (1893); *Ogilvie-Grant, P. & P.* p. 295 (1912); *id. Ibis*, 1913, p. 106.

Ptilonopus coronulatus van Oort, p. 65 (1909); *Roths. & Hartert, N. Z.* xx. p. 477 (1913).

a-g. ♂ ♀. Mouth of the Mimika River, 3rd-9th Dec. 1910, 24th & 25th March 1911. [Nos. 40, 84, 85, 1277, 1278, 1279, 1285, *C. H. B. G.*]

h, i. ♂. Wakatimi, Mimika River, 2nd March, 1911.
[Nos. 1062, 1064, *C. H. B. G.*]

k-n. ♂ ♀. Launch Camp, Setakwa River, 20th & 29th March and 18th Oct. 1912. [*C. B. K.*]

Iris, inner ring lemon-yellow, outer ring orange; orbital skin green; bill green; feet maroon or magenta.

This species nearly resembles the much smaller *P. nanus* on the under surface, and even on the upperparts it differs only in having a lilac-pink cap edged posteriorly with crimson and yellow, and in having the yellow on the scapulars and inner secondaries mostly confined to the outer web. The similarity of the colour and markings of the two species is very striking. A similar instance of close resemblance between two quite distinct species inhabiting the same area is found in the case of *P. gestroi* and *P. perlatus zonurus* described below.

"This little Fruit-Pigeon was only observed near the coast, where it was by no means uncommon, especially in the mangrove-swamps. It was usually observed in pairs and was very tame."—*C. H. B. G.*

***Ptilonopus humeralis*.**

Ptilopus humeralis Wallace; *Salvad. Cat.* xxi. p. 123 (1893).

Ptilinopus iozonus humeralis van Oort, p. 65 (1909).

a-f. ♂ ♀ et ♀ imm. Parimàu, Mimika River, 3rd–21st Dec. 1910. [Nos. 642, 643, 657, 685, 788, *C. H. B. G.*]

g-i. ♂ ♀. Canoe Camp, Setakwa River, 17th–20th Nov 1912. [*C. B. K.*]

Iris white or yellowish-white; orbital skin bluish-green; bill dark green, tip yellowish-green, cere crimson; feet magenta.

All the above specimens show traces more or less marked, of a grey subterminal band across the outer tail-feathers viewed from above; it is most pronounced in two of the males from Parimàu.

♀ *ad.* Culmen from the feathers on the forehead 16 mm.; wing 122–125; tail 53.

The shortness of the tail distinguishes this species from all the other species of *Ptilonopus* procured, except *P. nanus*, which is a much smaller bird.

A young female in first plumage from Parimàu appears

to be of this species. The whole plumage is dark green, darker than in the adult of *P. humeralis*. The wing-coverts are narrowly edged with pale yellow, the feathers of the back slightly so, and all the feathers of the breast and belly, especially down the middle line, are fringed with golden-yellow. It measures as follows:—

♀ *imm.* Culmen from the feathers on the forehead 16 mm.; wing 117; tail 54.

“This Fruit-Pigeon was not so plentiful as *P. gestroi*, with which it was found frequenting the same fruit-bearing trees. It was extremely difficult to see amongst the dense foliage, and it was only occasionally that one could be distinguished, though when a shot was fired numbers would leave the tree. It has a similar but more melodious call than *P. gestroi*, and a swift straight flight.”—*C. H. B. G.*

***Ptilonopus aurantiifrons*.**

Ptilopus aurantiifrons Gray; *Salvad. Cat.* p. 128 (1893).

Ptilinopus aurantiifrons van Oort, p. 65 (1909).

a-h. ♂ ♀. Mouth of the Mimika River, 13th Dec. 1910, & 14th–20th March, 1911. [Nos. 118, 1150, 1169, 1171 *, 1178, 1185, 1204, 1209, *C. H. B. G.*]

Iris orange, paler next the pupil; orbits sulphur-yellow; bill sulphur-yellow, cere and base of the lower mandible lake; feet rich magenta.

A single egg was procured at the mouth of the Mimika River on the 15th of March, 1911, together with the parent bird, No. 1171. It is white, almost devoid of gloss, and of a regular oval shape, slightly pointed at one end. It measures 34 × 24 mm.

“This Fruit-Pigeon was only observed near the coast and was especially plentiful in the mangrove-swamps. It was met with in pairs or in lots of three. It has a low soft ‘coo’ which is repeated several times, and its flight is swift and dashing. When seen sunning itself on the comparatively low mangrove-trees, it is a strikingly handsome bird.”—*C. H. B. G.*

* With one egg.

***Ptilonopus wallacei*.**

Ptilopus wallacei Gray ; Salvad. Cat. xxi. p. 129 (1893).

Ptilinopus wallacei Roths. & Hartert, N. Z. viii. p. 105 (1901).

a. ♀. Mimika River, 23rd Feb. 1910. [No. 1085, *G. C. S.*]

b. ♀. Wakatimi, Mimika River, 8th March, 1911. [No. 1128, *C. H. B. G.*]

Iris orange, inner ring yellow ; orbital skin bluish ; bill greenish-yellow or sulphur-yellow, yellow at the tip ; feet rich magenta to dull bright pink.

This species was not obtained either by Dr. Lorentz or by A. S. Meek, who was collecting for the Tring Museum. Both specimens are moulting heavily on the head and upper parts of the body.

Count Salvadori gives as the habitat of this species Aru and Kei Islands, Timor Laut and Babbar. To these localities Messrs. Rothschild and Hartert add Banda and South-east Islands, but the species does not appear to have been recorded previously from the mainland of New Guinea.

"Wallace's Fruit-Pigeon was probably not such a scarce bird as it appeared to be. It was most likely overlooked among the many other species of the same genus, and the specimens secured were certainly not distinguishable in the jungle."—*C. H. B. G.*

***Ptilonopus gestroi*.**

Ptilopus gestroi D'Alb. & Salvad. ; Salvad. Cat. xxi. p. 131 (1893) ; Ogilvie-Grant, P. & P. p. 295 (1912) ; id. *Ibis*, 1913, p. 106.

Ptilinopus gestroi Roths. & Hartert, N. Z. xx. p. 478 (1913).

a-i. ♂ ♀. Parimau, Mimika River, 2nd-19th Dec. 1910. [Nos. 636, 645, 646, 649, 650, 663, 690, 750, 778, *C. H. B. G.*]

k. ♂. Wataikwa River, 21st Oct. 1910. [No. 1410, *G. C. S.*]

l-o. ♂ ♀. Canoe Camp, Setakwa River, 15th-27th Nov. 1912. [*C. B. K.*]

p. ♂. Camp 6 c, Utakwa River, 5500 ft., 19th Feb. 1913. [*C. B. K.*]

Iris, inner ring orange, outer ring blood-orange ; eyelid yellow ; bill yellow, sulphur-yellow, or greenish-yellow ; cere brown ; feet purplish or magenta.

Ptilonopus gestroi kaporensis was described by Messrs. Rothschild and Hartert (N. Z. viii. p. 105, 1901) from a single female specimen obtained at Kapaur, south of McCluer Gulf, by Doherty. They remark : "It is a most distinct form, and most ornithologists would call it a good species." Subsequently, however (*op. cit.* xx. p. 478, 1913), the same authors state : "We now believe that our supposed *kaporensis* is only a very highly coloured *old male* !" The type of *P. g. kaporensis* was said to differ from the typical form chiefly in having the forehead and sinciput to beyond the eyes brownish-orange, instead of a greenish-orange-yellow ; the remainder of the crown, occiput, and sides of the head greenish-orange instead of greenish-orange-yellow ; and the mantle deep orange-brown instead of green washed with olivaceous-orange.

Our series clearly proves that these differences are individual, and are no doubt partly due to age. The colour of the fore-neck in males varies from orange-yellow to deep orange, and in the females from dark yellow to orange-yellow. The colour of the upper mantle and breast also varies from orange-olive to deep orange-brown.

"This is a common Fruit-Pigeon, but only found in numbers when a fruit-bearing tree is met with. In December at Parimau the Dyaks and I discovered a tree where literally hundreds of this species and of *P. humeralis* came to feed, especially in the early morning, and on one occasion I shot no less than eight. Unfortunately the tree was an unusually tall one, and most of the shots fired were ineffective. The call consists of five or six quickly repeated 'coos,' and the flight is swift and straight."—*C. H. B. G.*

Ptilonopus perlatus zonurus.

Ptilopus zonurus Salvad. Cat. xxi. p. 133 (1893) ; Ogilvie-Grant, P. & P. p. 295 (1912) ; *id.* Ibis, 1913, p. 106.

Ptilinopus perlata zonurus van Oort, p. 65 (1909) ; Roths. & Hartert, N. Z. xx. p. 478 (1913).

a. ♀. Wakatimi, Mimika River, 28th Dec. 1910. [No. 199, *C. H. B. G.*]

b. ♀. Upper Mimika River, 24th Jan. 1910. [No. 100, *G. C. S.*]

c. ♂. Parimau, Mimika River, 16th Nov. 1910. [No. 500, *C. H. B. G.*]

d. ♂. White Water Camp, Kaparé River, 4th Nov. 1910. [No. 443, *C. H. B. G.*]

e, f. ♂. Canoe Camp, Setakwa River, 27th Nov. & 22nd Dec. 1912. [*C. B. K.*]

Iris, inner ring sulphur-yellow, outer ring orange-chrome; orbits sulphur-yellow; bill sulphur-yellow or olive, dull yellowish towards the tip; feet magenta or dull crimson.

The extraordinary resemblance to *P. gestroi* in the markings and colouring of this species has already been drawn attention to in my notes in 'Pygmies and Papuans,' which were republished in 'The Ibis,' 1913. The underparts of the two species are practically indistinguishable, and on the upperparts practically the only difference lies in the markings of the wing-coverts and scapulars, which are green with a subterminal spot of bright pink in the present species, while in *P. gestroi* the least wing-coverts are crimson and the next series as well as the scapulars are grey fringed with greenish-yellow.

This form is very closely allied to typical *P. perlatus* from Western New Guinea; but in all the specimens listed above the grey subterminal band across the outer tail-feathers, when viewed from above, is well-marked and extends over the inner web and partially over the outer, only the external portion being green.

The British Museum possesses only three examples of typical *P. perlatus*: in these the subterminal band is either wanting or represented by a subterminal spot of grey on the outer margin of the inner web.

"This Fruit-Pigeon frequented the taller trees, where it was found feeding on the fruit. At White Water Camp on the Kaparé River, many used to come to one very tall tree in company with other Pigeons and numbers of

Hornbills, but the height was so great that shooting at them was a pure waste of cartridges."—*C. H. B. G.*

***Ptilonopus bellus*.**

Ptilopus bellus Selater ; *Salvad. Cat.* xxi. p. 138 (1893).

Ptilinopus rivolii bellus Roths. & Hartert, *N. Z.* xx. p. 477 (1913).

a. ♀. White Water Camp, Kaparé River, 24th Oct. 1910. [No. 363, *C. H. B. G.*]

b-h. ♂ ♀. Iwaka River, 2nd-12th Feb. 1911. [Nos. 223, 227, 982, 1000, 1016, 1035, *C. H. B. G.*]

i-m. ♂ et ♂ imm. Camp 3, Utakwa River, 2500 ft., 27th Nov.-26th Dec. 1912. [*C. B. K.*]

n-u. ♂ ♀ et ♀ imm. Camp 6 A, Utakwa River, 2900 ft., 5th-19th Jan. 1913. [*C. B. K.*]

v-x. ♂ ♀. Camp 6 B, Utakwa River, 4200 ft., 26th Jan.-3rd Feb. 1913. [*C. B. K.*]

y, z. ♂ ♀. Camp 6 c, Utakwa River, 5500 ft., 19th-23rd Feb. 1913. [*C. B. K.*]

a'-c'. ♂ ♀. Camp 9, Utakwa River, 5500 ft., 25th Jan.-2nd Feb. 1913. [*C. B. K.*]

♂. Iris, inner ring pale yellow, outer orange; orbital skin dark olive; bill light yellowish-green, cere and skin before the eye bright lemon; feet dark magenta.

♀. Similar, but with the orbital skin violet; bill and skin before the eye pale greenish-yellow.

Two young birds in first plumage, one of either sex, resemble the female; but the wing-coverts are edged with yellow and the quills are more distinctly margined than in the adult, the secondaries with yellow, the primaries with whitish. The young male has the crimson cap and yellow-and-white chest-band partly developed, interrupted in the middle; also an indication of the magenta patch on the breast.

"I met with this Fruit-Pigeon on the mountains only, where it was tolerably common, especially on the Iwaka River. It was usually observed in pairs, when feeding on the wild fruit of the larger trees. It has a low sweet 'coo,' and its flight is like that of the allied species."—*C. H. B. G.*

***Ptilonopus nanus*.**

Ptilonopus nanus (Temm.) ; Salvad. Cat. xxi. p. 147 (1893); Ogilvie-Grant, P. & P. p. 295 (1912); id. Ibis, 1913, p. 106.

a. ♂. Wakatimi, Mimika River, 7th March, 1911. [1111, *C. H. B. G.*]

b-f. ♂ ♀. Canoe Camp, Setakwa River, 25th Nov. & 11th Dec. 1912. [*C. B. K.*]

♂. Iris, inner ring clear pale grey, outer ring darker grey; orbits blue-grey; bill yellowish-green; feet magenta.

♀. Iris greyish-white; bill olive-brown, base of the lower mandible green; feet dull livid purple.

This lovely little Fruit-Pigeon is almost a miniature of *P. coronulatus*. Remarks on their close resemblance will be found above under that species (p. 293).

***Megaloprepia puella*.**

Megaloprepia puella (Lesson); Salvad. Cat. xxi. p. 170 (1893).

Megaloprepia magnifica puella van Oort, p. 66 (1909); Roths. & Hartert, N. Z. xx. p. 479 (1913).

a-d. ♂ ♀. Upper Mimika River, 27th Jan.-20th Feb. 1910. [Nos. 1012, 1040, 1075, 1079, *G. C. S.*]

e-p. ♂ ♀. Parimau, Mimika River, 28th Aug.-18th Dec. 1910. [Nos. 32, 202, 519, 547, 583, 584, 585, 614, 765, *C. H. B. G.*; 1488, 1514, *G. C. S.*]

q. ♂. White Water Camp, Kaparé River, 26th Oct. 1910. [No. 376, *C. H. B. G.*]

r, s. ♂. Wataikwa River, 8th Oct. 1910 & 17th Feb. 1911. [No. 1328, *G. C. S.*]

t-y. ♂. Launch Camp, Setakwa River, 3rd-30th Oct. 1912. [*A. F. R. W. & C. B. K.*]

z, a'. ♂ ♀. Canoe Camp, Setakwa River, 13th & 22nd Nov. 1912. [*C. B. K.*]

Iris crimson; orbits dark bluish-green; bill bright yellowish-green, patches behind the nostrils crimson; feet green to dark grass-green.

One male, specimen "*q*," has the underparts almost

magenta, and is darker than any other in the series ; it is probably an old bird.

“This Purple-breasted Fruit-Pigeon was a very common species, especially so in the middle belt of country below the foot-hills. Around Parimâu its call of ‘coo-uk-coo’ could be heard everywhere, the middle syllable rendering it easily recognisable from that of any other Pigeon. It was by no means a wild bird. On one occasion I came across the nest, a mere platform of sticks, containing one egg, but, as it was placed rather high up on some very slender twigs, I was unable to secure it. The sitting bird was very tame, and would not leave the nest till the branch was shaken.”—*C. H. B. G.*

Carpophaga zoeæ.

Carpophaga zoeæ (Lesson); Salvad. Cat. xxi. p. 204 (1893); van Oort, p. 66 (1909); Roths. & Hartert, N. Z. xx. p. 478 (1913).

a, b. ♂. Upper Mimika River, 12th Feb. & 29th March, 1910. [Nos. 1058, 1109, *G. C. S.*]

c-e. ♂. Parimâu, Mimika River, 13th Sept.-21st Dec. 1910. [Nos. 185, 196, 790, *C. H. B. G.*]

f, g. ♂ ♀. Wataikwa River, 8th & 26th Oct. 1910. [Nos. 1327, 1439, *G. C. S.*]

h-l. ♂ ♀. Canoe Camp, Setakwa River, 11th Nov.-20th Dec. 1912. [*C. B. K.*]

Iris white or buff, or with the inner ring white and the outer black; orbital skin lake; bill black; feet dull crimson to magenta.

“This Fruit-Pigeon was a tolerably common species and frequented the larger trees. Many were shot, but the fall from a great height knocked out bunches of feathers, rendering them quite useless for preservation.”—*C. H. B. G.*

Carpophaga rufiventris.

Carpophaga rufiventris Salvad.; id. Cat. xxi. p. 212 (1893).

Carpophaga rufigaster (Quoy & Gaim.); van Oort, p. 67 (1909); Roths. & Hartert, N. Z. xx. p. 478 (1913).

a. ♂. Wakatimi, Mimika River, 4th March, 1911.
[No. 1092, *C. H. B. G.*]

b. Ad. Upper Mimika River, 9th April, 1910. [No. 1125, *G. C. S.*]

c-g. ♂ ♀. Parimàu, Mimika River, 20th Nov. 1910-8th Jan. 1911. [Nos. 1510, *G. C. S.*; 531, 608, 884, 891, *C. H. B. G.*]

h-k. ♂ ♀. Launch Camp, Setakwa River, 18th & 19th Oct. 1912. [*C. B. K.*]

l. ♂. Canoe Camp, Setakwa River, 11th Dec. 1912. [*C. B. K.*]

m. ♂. Camp 3, Utakwa River, 2500 ft., 25th Dec. 1912. [*C. B. K.*]

Iris and orbital skin crimson; bill black; feet carmine or maroon.

"The Chestnut-bellied Fruit-Pigeon was a tolerably common species and frequented the depths of the jungle, where it came to feed on the large fruit-bearing trees in company with other pigeons. It has a deep melodious 'coo.'"—*C. H. B. G.*

****Carpophaga chalconota*.**

Carpophaga chalconota Salvad.; id. Cat. xxi. p. 213 (1893); Roths. & Hartert, N. Z. xx. p. 478 (1913).

Males and females were collected on Mount Goliath.

***Carpophaga muelleri*.**

Carpophaga muelleri (Temm.); Salvad. Cat. xxi. p. 221 (1893); van Oort, p. 66 (1909); Roths. & Hartert, N. Z. xx. p. 478 (1913).

a, b. ♂ ♀. Mouth of the Mimika River, 14th & 25th March, 1911. [Nos. 1155, 1282, *C. H. B. G.*]

c-g. ♂ ♀. Launch Camp, Setakwa River, 3rd Oct.-2nd Nov. 1912. [*C. B. K.*]

Iris brown, dull hazel or pale raw-umber; orbital skin raw-sienna; feet crimson-lake, plum-red, or maroon.

The female differs slightly from the male in having the

fore-part of the black ring round the neck more distinctly spotted with dull whitish, producing a mottled appearance. In the male the spotting is scarcely apparent.

Two Fruit-Pigeon's eggs were brought in by natives, who pointed out No. 1155 as the parent bird. Mr. Claude Grant was satisfied as to the correctness of this identification. The eggs are of a regular oval shape, pure white, and slightly glossy. They measure respectively 46×33 and 45.5×34 mm.

"Müller's Fruit-Pigeon was observed both at Wakatimi and on the coast, but was distinctly scarce. It was usually seen in pairs, and had the same flight and habits as the other large Pigeons."—*C. H. B. G.*

Carpophaga pinon.

Carpophaga pinon (Quoy & Gaim.) ; Salvad. Cat. xxi. p. 222 (1893) ; van Oort, p. 67 (1909) ; Roths. & Hartert, N. Z. xx. p. 478 (1913).

Carpophaga pinon rubiensis van Oort (nec Meyer), *t. c.* p. 67.

a-c. ♂ ♀. Wakatimi. Mimika River, 23rd Aug. 1910 & 6th March 1911. [Nos. 14, 19, 1110, *C. H. B. G.*]

d-f. ♂. Upper Mimika River, 3rd Feb.—29th April, 1910. [Nos. 1018, 1063, 1139, *G. C. S.*]

g-i. ♂ ♀. Parimau, Mimika River, 6th Sept.—30th Nov. 1910. [Nos. 146, 240, 622, *C. H. B. G.*]

k. ♂. Tuaba River, 1st Nov. 1910. [No. 1465, *G. C. S.*]

l. ♀. Wataikwa River, 18th Oct. 1910. [No. 1392, *G. C. S.*]

m-s. ♂ ♀. Launch Camp, Setakwa River, 4th Oct. 1912—15th March, 1913. [*C. B. K.*]

t. ♀. Canoe Camp, Setakwa River, 9th Dec. 1912. [*C. B. K.*]

Iris, inner ring pink, outer maroon or blood-red ; orbital skin dull red or maroon ; bill lavender-grey or bluish-lavender ; feet dull red, nails pearl-grey.

All the specimens collected by our expeditions are typical

C. pinon. The birds recorded by Dr. van Oort as *C. p. rubiensis* from Etna Bay are also probably referable to *C. pinon*, and not to the former.

Greasy specimens sometimes have the wing-coverts blackish distinctly edged with light grey. A feather taken from a bird in this condition, and placed in benzoline for a few minutes, when dried becomes grey, and the grey edges then become inconspicuous.

"This was the commonest Fruit-Pigeon on the Mimika, and was often observed in flocks. It frequented the fruit- and berry-bearing trees in numbers and was a conspicuous bird. As it was excellent eating, it formed a very welcome addition to our tinned foods. The call was very similar to that of the Common European Wood-Pigeon."—*C. H. B. G.*

****Carpophaga albigularis*.**

Columba albigularis (Bonap.) ; Salvad. Cat. xxi. p. 313 (1893) ; Roths. & Hartert, N. Z. xx. p. 479 (1913).

A male of this dark Fruit-Pigeon was obtained on the Utakwa at an elevation of 3000 ft.

***Myristicivora spilorrhoea*.**

Myristicivora spilorrhoea (Gray) ; Salvad. Cat. xxi. p. 231 (1893) ; Ogilvie-Grant, P. & P. p. 295 (1912) ; id. Ibis, 1913, p. 105.

Myristicivora bicolor spilorrhoea van Oort, p. 68 (1909).

a-f. ♂ ♀. Mouth of the Mimika River, 15th and 20th Dec. 1910, 14th–24th March, 1911. [Nos. 146, 163, *G. C. S.*, & 1154, 1198, 1202, 1261, *C. H. B. G.*]

Iris deep rich brown ; orbits slate-blue ; bill blue at the base, pale green at the tip ; feet slate-blue.

Mr. Goodfellow observed this species breeding in May along the creeks near the mouth of the Mimika River, and says that no fewer than seven nests were found in one tree.

"This Nutmeg-Pigeon was observed along the coast and sparingly as far inland as Wakatimi. While on the coast, large flocks came every morning and evening to

roost in the mangroves near my camp, and numbers were shot and proved excellent eating. In the early morning they frequented the dead trees along the sea-front, sunning themselves in the first rays of the rising sun, afterwards retiring for food into the depths of the swamps.

"As the flocks passed, or were seen from a distance perched on the tops of the mangroves, they presented a snow-white appearance and were very striking objects in the landscape."—*C. H. B. G.*

***Gymnophaps albertisii*.**

Gymnophaps albertisii Salvad.; id. Cat. xxi. p. 240 (1893); van Oort, p. 64 (1909); Roths. & Hartert, N. Z. xx. p. 479 (1913).

a. ♀. Kamura River, 18th May, 1910. [No. 1159, *G. C. S.*]

b, c. ♂ ♀. Iwaka River, 10th & 12th Feb. 1911. [No. 1014, 1036, *C. H. B. G.*]

d-f. ♂. Canoe Camp, Setakwa River, 9th & 10th Dec. 1912, 2nd Jan. 1913. [*C. B. K.*]

g. ♂. Camp 2, Setakwa River, 9th Feb. 1913. [*C. B. K.*]

h. ♂. Camp 6 B, Utakwa River, 4200 ft., 8th Feb. 1913. [*C. B. K.*]

i. ♂. Camp 6 c, Utakwa River, 5500 ft. 17th Feb. 1913. [*C. B. K.*]

Male. Iris orange; orbital skin sealing-wax red; tip of the upper mandible and base of the lower pinkish-grey, base of the upper mandible and tip of the lower livid crimson; feet livid carmine.

Female. Iris, inner ring orange, outer vermilion; orbits, lores, and nostrils vermilion; tips of both mandibles rich lilac, rest of lower mandible pearly-grey; feet carmine.

The female of this species is quite differently coloured below from the male, a fact which has not been made quite clear by Count Salvadori. The chin and throat are grey, instead of dark chestnut; and the chest and breast are pale

vinaceous finely freckled with grey, instead of uniform pinkish-white. These sexual differences are apparent as soon as the young bird assumes its first adult plumage, as is clearly shown by young specimens in the British Museum.

In both sexes the young bird has the black margins of the feathers on the back very much narrower than in the adult or scarcely indicated, and some of the scapulars are bright chestnut or black tipped with that colour; the forehead, cheeks, and throat are dull chestnut; the breast-feathers are widely tipped with much the same colour, and the belly and under tail-coverts are mostly chestnut. In a young male the breast-feathers are moulting in nearly pure white; while in two females the breast-feathers are pinkish, densely and finely freckled with grey.

Mr. Walter Goodfellow describes the flight of D'Albortis' Pigeon as extremely rapid, and says that their aerial evolutions reminded him of those of the common "Tumbler" Pigeon.

Mr. Claude Grant writes:—

"This species was only seen when I was at my highest camp on the peak above the Iwaka River. There every morning and evening two large flocks crossed, going down to the low ground to feed and returning to roost at night, when they flew straight up the wide river-valley towards the great mountains beyond. On the two occasions that specimens were secured the weather was very wet and misty, and the birds settled for a few moments in the stunted trees on the peak, probably with the idea of getting their bearings. They literally covered the trees, but unfortunately only one was secured on each occasion. To fire a second barrel was out of the question, as it was impossible to get on to them quick enough and, if killed, a bird would have fallen far below into the great valley and would almost certainly have been lost."

Mr. C. B. Kloss believes that this Pigeon is met with from sea-level to the highest ground on Mount Carstensz, though no specimens were procured in the latter locality.

Macropygia cinereiceps.

Macropygia cinereiceps Tristram ; Salvad. Cat. xxi. p. 357 (1893).

Macropygia amboinensis cinereiceps van Oort, p. 63 (1909); Roths. & Hartert, N. Z. xx. p. 479 (1913).

Macropygia griseinucha Ogilvie-Grant (nec Salvad.) P. & P. p. 296 (1912) ; id. Ibis, 1913, p. 107.

*a-d**. ♂ ♀. Parimau, Mimika River, 3rd Sept.—11 Dec. 1910. [Nos. 112, 218, 539, 711, *C. H. B. G.*]

e-h. ♂ ♀. White Water Camp, Kaparé River, 20th Oct.—3rd Nov. 1910. [Nos. 340, 341, 408, 434, *C. H. B. G.*]

i-r. ♂ ♀ et ♂ imm. Wataikwa River, 7th—29th Oct. 1910. [Nos. 1316, 1354, 1355, 1358, 1359, 1416, 1417, 1457, 1458, *G. C. S.*]

s. ♀. Iwaka River, 24th Jan. 1911. [No. 911, *C. H. B. G.*]

t, u. ♂ ♀. Launch Camp, Setakwa River, 2nd Oct. 1912 & 12th March, 1913. [*C. B. K.*]

v. ♀. Canoe Camp, Setakwa River, 8th Dec. 1912. [*C. B. K.*]

*w**-*y*. ♂ ♀. Camp 3, Utakwa River, 2500 ft., 20th & 28th Nov. 1912 & 14th Jan. 1913. [*C. B. K.*]

z, a'. ♂. Camp 6 A, Utakwa River, 2900 ft., 10th & 17th Jan. 1913. [*C. B. K.*]

Specimens *d* and *w* (marked with an asterisk) are remarkable, and differ from all the other males in the series collected. Both have the forehead and crown buff slightly tinged with greyish, and the hinder part of the crown behind the orbits as well as the occiput rufous in specimen *d* and vinaceous-rufous tinged with grey in specimen *w*. Both these birds, as far as the colouring of the head is concerned, might be referred to *M. goldiei* from South-east New Guinea, were it not that the colour of the back is dark reddish-brown, almost vandyke-brown, instead of dark chestnut-brown. All the other males in the series have the forehead whitish and the crown and occiput pale grey like the hind-neck, and are typical examples of *M. cinereiceps*. I can only regard specimens *d* and *w* as accidental variations.

I do not believe that *M. goldiei* is founded on "less mature" examples of *M. cinereiceps* as is stated by Messrs. Rothschild and Hartert [N. Z. viii. p. 125 (1901)], as I have before me absolute proof that the young male of *M. cinereiceps* assumes a grey head, quite like that of the adult, directly it moults from the juvenile plumage. *M. goldiei*, moreover, seems, as already stated, to have more rufous upperparts than *M. cinereiceps*, but this may be partially due to wear or fading.

I am by no means convinced that it is correct or even expedient to regard *M. cinereiceps* and *M. goldiei* as subspecies of *M. amboinensis*, which has the underparts very strongly barred and seems to belong to another section of the genus.

"This Cuckoo-Dove was undoubtedly the commonest of the smaller Pigeons, especially between Parimau and the mountains. It has a graceful flight and a sweet call of three or four coos. It appears to spend much of its time feeding on the ground, but when alarmed flies up into the trees and is then easily secured."—*C. H. B. G.*

***Macropygia nigrirostris*.**

Macropygia nigrirostris Salvad.; id. Cat. xxi. p. 361 (1893); Roths. & Hartert, N. Z. xx. p. 479 (1913).

a-d. ♂ et ♂ imm. Parimau, Mimika River, 25th Sept.—15th Dec. 1914. [Nos. 251, 490, 545, 740, *C. H. B. G.*]

e-m. ♂ ♀ et ♂ imm. Camp 9, Utakwa River, 5500 ft., 25th–30th Jan. 1913. [*C. B. K.*]

Iris formed of successive different-coloured rings, pale yellow next to pupil, then black, and externally orange; lores and orbits dark crimson; bill black; feet coral-red or crimson.

Two of the male specimens, *d* and *f*, are not quite mature, and still retain one or more secondary quills of the first plumage.

"Apparently a scarce bird, but as it is almost indistinguishable in life from *M. cinereiceps*, except at very close quarters, it was probably frequently overlooked. Its habits are similar to those of *M. cinereiceps*."—*C. H. B. G.*

**Macropygia doreya*.

Macropygia doreya Bonap.; Salvad. Cat. xxi. p. 355 (1893).

Macropygia amboinensis doreya van Oort, p. 63 (1909).

This Cuckoo-Dove was met with at Etna Bay.

Reinwardtœnas reinwardti griseotincta.

Reinwardtœnas reinwardti (Temm.); Salvad. Cat. xxi. p. 365 (1893) [part.].

Reinwardtœnas reinwardti griseotincta Hartert, N. Z. iii. p. 18 (1896).

Reinwardtœnas reinwardtsi griseotincta van Oort, p. 64 (1909); Roths. & Hartert, N. Z. xx. p. 480 (1913).

a. ♂. Wakatimi, Mimika River, 18th Oct. 1910. [No. 1391, *G. C. S.*]

b. ♂. Upper Mimika, 2nd Feb. 1910. [No. 1022, *G. C. S.*]

c-e. ♂ ♀ et ♀ imm. Parimau, Mimika River, 3rd-13th Sept. 1910. [Nos. 113, 160, 189, *C. H. B. G.*]

f, g. ♀ et ♂ imm. White Water Camp, Kaparé River, 12th Oct. & 5th Nov. 1910. [Nos. 303, 447, *C. H. B. G.*]

h. ♀. Launch Camp, Setakwa River, 6th Nov. 1912. [*C. B. K.*]

i. ♂. Canoe Camp, Setakwa River, 18th Nov. 1912. [*C. B. K.*]

k. ♂. Camp 3, Utakwa River, 2500 ft., 12th Jan. 1913. [*C. B. K.*]

l-n. ♂. Camp 6 A, Utakwa River, 2900 ft. 16th & 17th Jan. 1913. [*C. B. K.*]

Adult. Iris, inner ring whitish or yellowish-white, outer ring pink or crimson; orbital skin crimson; basal half of bill crimson, tip brown; feet carmine.

Immature. Iris yellow or brown; bill brown; feet brown tinged with crimson.

The series of specimens collected between September and February are very uniform in colouring, and are much greyer than typical examples of *R. reinwardti* from Celebes and the islands to the west of New Guinea.

As regards size, the following are the wing-measurements of specimens in the British Museum :—

	♂ . Celebes (type-locality).	Wing 222 mm.
	♀ . Gilolo.	„ 212 „
♂ et	♂ . Batchian.	„ 222–235 mm.
	♂ . Amboina.	„ 224 mm.
	♂ . Ceram.	„ 217 „
	♀ . Salawatti.	„ 237 „
	♂ . Waigiu.	„ 237 „
	♂ . South New Guinea.	„ 231–244 mm.
	♀ . „ „	„ 225–230 „

From the above measurements it will be seen that specimens of typical *R. reinwardti* from Celebes and the western islands are rather smaller than the greyer form found in New Guinea. Birds from Salawatti and Waigiu approach the New Guinea birds in size, and are perhaps somewhat greyer on the mantle and underparts than those from Celebes, Gilolo, Batchian, etc.

“Reinwardt’s Cuckoo-Dove was not uncommon, but not nearly so plentiful as *Macropygia cinereiceps*. It has a swift and graceful flight, especially when seen crossing the open beds of the rivers. It was by no means wild.”—*C. H. B. G.*

***Chalcophaps stephani*.**

Chalcophaps stephani Reichenb. ; Salvad. Cat. xxi. p. 520 (1893) ; van Oort, p. 63 (1909) ; Roths. & Hartert, N. Z. xx. p. 480 (1913).

a-c. ♀ . Wakatimi, Mimika River, 24th Dec. 1910–5th March, 1911. [Nos. 181, 1067, 1095, *C. H. B. G.*]

d-f. ♂ ♀ . Parimau, Mimika River, 28th Sept.–27th Dec. 1910. [Nos. 273, 792, 849, *C. H. B. G.*]

g. ♂ . Launch Camp, Setakwa River, 9th March, 1913, [*C. B. K.*]

Iris dark chocolate-brown ; orbit deep lake ; bill red, deep lake at the base ; feet bluish-lake.

“This dainty little Dove spends all its time on the ground, only perching in the trees when alarmed. It is by no

means uncommon, but being a ground-bird and living among the denser undergrowth, it is more often to be heard getting on the wing than seen.”—*C. H. B. G.*

Henicophaps albifrons schlegeli.

Rynchænas schlegeli Rosenb. Nat. Tijd. Ned. Ind. xxix. p. 143 (1867).

Henicophaps albifrons Gray; Salvad. Cat. xxi. p. 524 (1893) [part.]; van Oort, p. 62 (1909); Roths. & Hartert, N. Z. xx. p. 480 (1913).

a. ♀. Mimika River, 23rd April, 1910. [No. 1132, *G. C. S.*]

b-f. ♂. Parimàu, Mimika River, 6th Sept. 1910–8th Jan. 1911. [Nos. 91, 173, 801, 869, 890, *C. H. B. G.*]

g. ♂. Iwaka River, 4th Feb. 1911. [No. 901, *C. H. B. G.*]

h. ♂. Wataikwa River, 29th Oct. 1910. [No. 1453, *G. C. S.*]

Iris dark brown; bill ashy-horn colour, lower mandible pale at the base; feet deep salmon to crimson and magenta.

The colour of the forehead and crown of the head in *adult male* birds, on which subject Dr. van Oort has made some critical remarks, does not seem to be of any importance, as in some birds from Parimàu the crown is white, while in others it is white washed with buff. The colouring-matter is probably caused by the fruit on which the bird had been feeding. I believe also that the male differs in plumage and size from the female. The male has a larger bill (39–43 mm.), longer wing (192–206 mm.), and the underparts washed with grey. The female has a shorter bill (32–35 mm.), shorter wing (184–187 mm.), the hinder part of the crown buff or light rufous, and the underparts usually reddish-brown or slightly washed with grey.

Count Salvadori says the plumage of the sexes is alike, but, as noted above, I am sure that this is an error, as the female procured on the Mimika appears to be a perfectly adult bird, and specimens kindly lent to me by the Tring Museum support this view.

The types of *H. albifrons* are in the British Museum. They were collected by Wallace in Waigiu, and described and figured by Gray (Proc. Zool. Soc. 1861, p. 432, pl. xlv., Register Nos. 62. 9. 11. 29-31).

There are also two specimens in the British Museum from Arfak, New Guinea, obtained by Wallace's collector in 1861, which came into the Museum later: one through Wallace himself in 1873 (73. 5. 12. 2070) and the other through Gould in 1881 (81. 5. 1. 2810).

In 'The Ibis,' 1865, p. 392, Wallace says:—"This curious species was first shot by myself in Waigiu; it was afterwards obtained by my collector in New Guinea."

The type-specimens of *H. albifrons* from Waigiu seem to be altogether smaller than birds from New Guinea and have a much smaller bill.

The form found in the Aru Islands has been separated as *H. schlegeli* (Rosenb.). The only typical example in the British Museum is an adult male procured by Mr. Walter Goodfellow at Silbattabatta in February 1904. This bird does not seem to differ from those from South-east New Guinea, except that the underparts are more vinaceous and less grey, which is probably caused by wear. I have, therefore, adopted Rosenberg's name for the larger New Guinea form of this Pigeon.

Mr. Claude Grant found the White-fronted Ground-Dove tolerably common, but very wary. It is distinctly a ground-haunting species, though it often perches in the large trees. Males were seen showing off to the females after the manner of the Wood-Pigeon.

On being disturbed, they fly for a considerable distance, the flight being swift and straight considering the density and close proximity of the trees.

Phlogœnas rufigula.

Phlogœnas rufigula Bonap.; Salvad. Cat. xxi. p. 588 (1893).

a-c. ♂ ♀. Mimika River, 6th Feb.-9th March, 1910,
[W. G., & Nos. 1032, 1101, G. C. S.]

d-f. ♂ ♀. Parimau, Mimika River, 6th Sept.-19th Dec. 1910. [Nos. 145, 777, *C. H. B. G.*, & 1513, *G. C. S.*]

g-l. ♂ ♀ et ♂ ♀ imm. Wataikwa River, 18th Sept.-16th Oct. 1910. [Nos. 1179, 1266, 1299, 1375, 1379, *G. C. S.*]

m. ♂. Wataikwa River, 3rd Oct. 1910. [No. 1298, *G. C. S.*]

Iris dark claret- or violet-colour ; orbital skin and bill mulberry or dark claret-colour ; legs and feet purple or dull claret.

The typical form of this species was met with between the Mimika and Wataikwa Rivers. One adult male specimen (No. 1298) from the latter district appears to be intermediate between *P. rufigula* and *P. r. helviventris*, inasmuch as the area above and behind the eye is pinkish-lavender like the sides of the neck, and not grey. In *P. r. helviventris* the dark purplish-maroon crown descends almost to the orbit, leaving only a narrow superciliary band, which, as already indicated, is pale pinkish-lavender. The two forms are no doubt very closely allied. Two immature birds from the Setakwa River with the tips of the wing-coverts grey fringed with rufous and the upper breast reddish-chestnut show some grey behind the eye, a point which has already been noted by Messrs. Rothschild and Hartert, but the adult birds appear to me to be separable.

It would thus seem that *P. r. helviventris* is confined to Southern New Guinea, and extends from the Fly River westwards to the Utakwa River and possibly to the Wataikwa River, where it intergrades with *P. rufigula*. It also occurs on the Aru Islands. To the west of the Wataikwa River and to the east of the Fly River, and in the north of New Guinea, typical *P. rufigula* is found, as also on the islands of Waigi, Salawatti, Misol, and Jobi.

"This Ground-Dove is quite common, but is very wary and takes flight at the least alarm.

"A nest found was placed very close to the ground. The

sitting bird was extremely wild, and several visits were paid to the nest before it could be secured."—*C. H. B. G.*

The egg is of a regular oval form, somewhat pointed towards the smaller end. It is white, faintly tinged with cream-colour, and somewhat glossy. It measures 33×24 mm.

Phlogœnas rufigula helviventris.

Phlogœnas helviventris (Rosenb.) ; Salvad. Cat. xxi. p. 590 (1893).

Phlogœnas rufigula van Oort (nec Bonap.), p. 62 (1909) ; Roths. & Hartert, N. Z. xx. p. 481 (1913).

a-c. ♂ ♀. Launch Camp, Setakwa River, 12th Oct.—3rd Nov. 1912. [*C. B. K.*]

d-f. ♀ et ♀ imm. Canoe Camp, Setakwa River, 26th Oct.—11th Dec. 1912. [*C. B. K.*]

Iris scarlet ; orbital skin and feet livid red ; bill red, greyish horn-colour at the tip.

As noted above, the young birds show some grey behind the eye, which is wanting in the adult birds.

****Phlogœnas beccarii.***

Phlogœnas beccarii (Salvad.) ; id. Cat. xxi. p. 593, pl. xi. fig. 1 (1893) ; Roths. & Hartert, N. Z. viii. p. 131 (1901), & xx. p. 480 (1913).

A young bird attributed to this Dove was found on the Utakwa River, 2000 ft.

Phlogœnas margaritæ.

Phlogœnas margaritæ (D'Alb. & Salvad.) ; Salvad. Cat. xxi. p. 597 (1893).

a. ♂. Upper Mimika River, 11th Feb. 1910. [No. 1050, *G. C. S.*]

b. ♂. Launch Camp, Setakwa River, 3rd Oct. 1912. [*C. B. K.*]

Iris dark brown ; orbital skin pale bluish or lead-colour ; bill black ; legs orange-red or light maroon, washed with brown.

****Eutrygon terrestris*.**

Eutrygon terrestris Gray ; Salvad. Cat. xxi. p. 609 (1893).

Trugon terrestris van Oort, p. 62 (1909).

A male of the typical western form of this Ground-Dove is recorded from Etna Bay. On the Mimika the following subspecies occurs and ranges to South-east New Guinea.

***Eutrygon terrestris leucopareia*.**

Eutrygon leucopareia Meyer ; Salvad. Cat. xxi. p. 610 (1893).

Trugon terrestris leucopareia Roths. & Hartert, N. Z. xx. p. 480 (1913).

a-c. ♂ ♀. Mimika River, 18th Feb., 11th April & 4th May, 1910. [Nos. 1072, 1128, 1150, *G. C. S.*]

d-f. ♂ ♀. Parimau, Mimika River, 21st & 22nd Sept. and 17th Dec. 1910. [Nos. 224, 235, & 751, *C. H. B. G.*]

g. ♀. Canoe Camp, Setakwa River, 17th Nov. 1912. [*C. B. K.*]

Iris crimson, red, or orange; bill, terminal half pale fleshy-white, basal portion dull plumbeous or dark slate-colour; feet flesh-colour.

I have retained the generic name *Eutrygon* as modified by Selater, *Trugon* (= *Trygon*) being preoccupied by Brehm for the extinct Passenger-Pigeon *Ectopistes migratorius*.

Mr. Claude Grant found this remarkable Ground-Pigeon tolerably plentiful. It had much the same habits as *Henicophaps albifrons*, but was never observed to perch in trees.

****Otidiphaps nobilis*.**

Otidiphaps nobilis Gould ; Salvad. Cat. xxi. p. 611 (1893); van Oort, p. 62 (1909); Ogilvie-Grant, P. & P. p. 294 (1912); id. Ibis, 1913, p. 105 ; Roths. & Hartert, N. Z. xx. p. 481 (1913).

a. ♀. Upper Mimika River, 18th Feb. 1910. [No. 1065, *G. C. S.*]

b, c. ♂ et ♀ imm. Parimau, Mimika River, 5th Sept. & 12th Nov. 1910. [Nos. 131, *C. H. B. G.*, & 1603, *G. C. S.*]

d. ♂. Kamura River, 16th May 1910. \[No. 1152, *G. C. S.*]

e, f. ♂ ♀. Wataikwa River, 29th Oct. 1910, \and 19th Feb. 1911. [Nos. 1456, *G. C. S.*, & 1044, *C. H. B. G.*]

g-k. ♂ ♀. Launch Camp, Setakwa River, 11th, 16th, & 27th Oct. 1912, and 9th March 1913. [*A. F. R. W. & C. B. K.*]

l, m. ♂ ♀. Canoe Camp, Setakwa River, 7th Nov. & 21st Dec. 1912. [*C. B. K.*]

n. ♂. Camp 3, Setakwa River, 2500 ft., 28th Dec. 1912. [*C. B. K.*]

Adult. Iris fiery-red ranging to reddish-orange; bill bright vermilion, tip yellowish; legs vermilion or dull maroon, scales yellowish-salmon, underparts of toes black.

Immature. Iris bright ochre-yellow, other parts much as in the adult.

“The Green-naped Ground-Pigeon is not uncommon, but is extremely wary and very seldom seen. It is essentially a ground-bird, and when walking carries its tail up and has much the appearance of a Bantam-fowl.

“The call is not easy to describe, but is a sort of moaning ‘coo,’ and can be heard at a great distance.”—*C. H. B. G.*

Goura sclateri.

Goura sclateri Salvad.; id. Cat. xxi. p. 622 (1893); van Oort, p. 61 (1909); Ogilvie-Grant, P. & P. p. 294 (1912); id. Ibis, 1913, p. 104.

a, b. ♂ ♀. Upper Mimika, 20th Feb. 1910. [*W. G.*, & No. 1077, *G. C. S.*]

c. ♀. Mimika River, 25th Aug. 1910. [No. 20, *C. H. B. G.*]

d-g. ♂ ♀ et imm. Parimau, Mimika River, 2nd Sept.—1st Oct. 1910. [Nos. 105, 163, 180, 287, *C. H. B. G.*]

h-k. ♂ ♀. Launch Camp, Setakwa River, 8th–11th Oct. 1912. [*C. B. K.*]

l, m. ♂ ♀. Canoe Camp, Setakwa River, 26th Oct. & 17th Nov. 1912. [*C. B. K.*]

Iris ruby-red or crimson ; bill slate-colour ; legs and feet purplish-red.

All the specimens collected by the Wollaston Expedition have the belly black, and some have also the rump, back, and part of the wings of the same dark colour. As Dr. van Oort has already noted (*t. c.* p. 61), this peculiarity is due to grease in the feathers. By immersing the skins in benzol the feathers regain their normal slate-blue colour. The black on the belly is so uniformly developed in all the birds from the Setakwa River that at the first glance they appeared to belong to a distinct form.

As Count Salvadori has already pointed out, the young bird lacks the chestnut spots at the end of the wing-coverts.

A female, specimen *k*, weighed 5 lbs. [*C. B. K.*]

Mr. Walter Goodfellow found this species "tolerably common near the base-camp on the Mimika River, and it was met with in all places visited by the Expedition. In spite of the numbers shot for food during the whole time the Expedition remained in the country, the supply did not appear to diminish. This fine Pigeon and a few others afforded the only fresh meat to be had. On the canoe-journeys up the river, Selater's Goura was frequently met with in the early mornings in parties of two or three, searching for aquatic life along the muddy banks. When disturbed they did not immediately take flight, but with raised wings pirouetted around for a few seconds and then flew to the nearest high tree."

Mr. Goodfellow found the remains of small crabs in their stomachs, and a large percentage of the birds shot were infested with a small red parasite—the same or similar to that which is known in other parts of New Guinea as "scrub-itch."

"This splendid Crowned Pigeon was common everywhere, though scarcer in the mountains. It was generally observed in parties of two or three. These usually frequent the ground, and when alarmed fly heavily into the top of some convenient tree.

"They are foolishly tame at times, and I have often had

several shots at them sitting on very small trees, the birds merely turning their heads this way and that before they reluctantly took flight.

“When seen crossing rivers the flight is strong, straight, and heavy.” [C. H. B. G.]

***Goura coronata.**

Goura coronata (Linn.); Salvad. Cat. xxi. p. 620 (1893); van Oort, p. 62 (1909).

A female of this Crown-Pigeon was procured at Etna Bay.

Family TURNICIDÆ.

***Turnix maculosus.**

Turnix maculosus (Temm.); Ogilvie-Grant, Cat. xxii. p. 546 (1893); van Oort, p. 57 (1909).

Obtained at Merauke.

Family PHASIANIDÆ.

***Anurophasis monorthonyx.**

Anurophasis monorthonyx van Oort, Notes, xxxii. p. 212 (1910).

This remarkable Game-bird was obtained by Dr. H. A. Lorentz at an elevation of about 12,500 ft. during his famous ascent of Wilhelmina Peak in the Snow Mountains. He says it was met with in stony ground “covered with rocks or thickly grown over with shrubs of hard tough wood, through which it was well-nigh impossible to force a way. On the unprotected plain blew a cold icy wind which made us feel far from comfortable.

“In this desolate wilderness I unexpectedly saw two Partridges fly up, one of which I had the good fortune to bag.”

Unfortunately the Wollaston Expedition did not come across this Partridge during the ascent of Mount Carstensz, but Mr. Wollaston observed Grouse-like droppings at an elevation of about 10,000 ft., which he had little doubt indicated the presence of this species.

Family MEGAPODIIDÆ.

Megapodius forsteni.

Megapodius forstenii Temm. ; Ogilvie-Grant, Cat. xxii. p. 451 (1893) [Type from Amboina].

Megapodius affinis Meyer, Sitzb. Ak. Wien, lxix. p. 215 (1874) [Rubi, Geelvink Bay].

Megapodius brunneiventris Meyer ; Ogilvie-Grant, t. c. p. 452 [Astrolabe Bay, E. New Guinea].

a. ♂. Camp 6 A, Utakwa River, 2900 ft., 11th Jan. 1913. [C. B. K.]

b. ♂. Camp 6 B, Utakwa River, 4200 ft., 2nd Feb. 1913. [C. B. K.]

Two of the Megapodes procured by the Wollaston Expedition at their higher camps on the Utakwa River are apparently referable to this species, which is a smaller mountain-form of *M. duperreyi* with dark legs. It was first described from Amboina.

Mr. Kloss describes specimen *a* as having the nuchal skin red and the legs black, but probably the colour of the latter was recorded after the bird had been dead for some time, as the legs are described as being "dusky yellowish-olive" by Wallace.

Megapodius duperreyi.

Megapodius duperreyii Less. & Garn. ; Ogilvie-Grant, Cat. xxii. p. 454 (1893) [Type from Dorei] ; Roths. & Hartert, N. Z. xx. p. 477 (1913).

a. ♂. Mouth of the Mimika River, 18th March, 1911. [No. 1194, C. H. B. G.]

b, c. ♂ et pull. Lower Mimika River, 11th Feb. 1910. [W. G., & No. 1045, G. C. S.]

d. ♂. Mimika River, 29th March, 1910. [No. 1108, G. C. S.]

e, f. ♂ ♀. Wakatimi, Mimika River, 28th Jan. & 22nd Aug. 1910. [Nos. 1004, G. C. S. & 12, C. H. B. G.]

g-i. ♂ ♀. Parimàu, Mimika River, 12th & 24th Sept., and 16th Nov. 1910. [Nos. 179, 250, *C. H. B. G.*, & 1522, *G. C. S.*]

k. ♀. Kaparé River, 13th Nov. 1910. [No. 478, *C. H. B. G.*]

l. ♀ imm. Wataikwa River, 14th Oct. 1910. [No. 1360, *G. C. S.*]

m-t. ♂ ♀ et ♂ juv. Launch Camp, Setakwa River, 5th-17th Oct. & 1st-3rd Nov. [*C. B. K.*]

When writing the twenty-second volume of the 'Catalogue of Birds,' I followed Oustalet in uniting the Australian Megapode described as *M. tumulus* Gould with *M. duperreyi*. At that time the Museum possessed five specimens only from New Guinea, three adult birds from the type-locality, Dorei on Geelvink Bay, and two immature birds from the Astrolabe Mountains in the south-east.

A careful examination has been made of the fine series collected by our expedition between the Mimika and Utakwa Rivers, and the specimens have been compared with the series already in the British Museum, arranged according to their geographical distribution. The new material now under consideration was collected between the middle of September and the end of March, and several of the specimens killed in September and October are in moult. These birds, taken as a whole series, have the colour of the back very uniform and are of a much more olivaceous-brown and less rufous tint than the majority of specimens from North-east Australia and its adjacent islands; the Mimika and Utakwa birds are rather more olive than typical specimens of *M. duperreyi* from Dorei, and examples from the Kei and Aru Islands, but birds from the last-named localities appear to be in freshly-moulted plumage. One female specimen from Wokan, Aru Islands, collected by the 'Challenger' Expedition, is very rufous on the back and is as dark as any from Cape York, and quite indistinguishable among the series from North Queensland. On the other hand, our birds from Port Essington seem to approach the Mimika birds in the colour of the back, but it must be

remembered that two of these have been mounted for many years, and a third, which is in moult on the back, has new feathers of a dark reddish-brown, as in the Queensland birds. There is also in the Museum a specimen from the Alligator River, North Australia, which appears to be less rufous than birds from the Cape York Peninsula. Other specimens, however, from the same locality in the Tring Museum, prove that these differences in the colour of the back are individual. Birds from Port Essington and the Alligator River are typical examples of *M. tumulus* Gould, which was described from the Coburg Peninsula.

I was at first inclined to believe that the North Australian bird, *M. tumulus*, might be separated from those inhabiting the Cape York Peninsula, which appeared to be darker and more rufous, but I have since modified my views, as it would require a much larger series of skins than we at present possess to settle this point.

M. d. melvillensis Mathews [*cf.* Aust. Av. Record, i. p. 26 (1912)] is now admitted by its describer* to be a pure synonym of *M. tumulus*.

M. assimilis Masters [P. Linn. Soc. N.S.W. i. p. 59 (1875)], described from Dungeness Island and Bet Island, and, as the author says, "found on many of the low-lying islands in Torres Straits," is said to differ from *M. tumulus* in its smaller size. The Museum possesses specimens from Prince of Wales Island and Booby Island, also in Torres Straits to the west of Dungeness. These are no doubt referable to *M. assimilis*, and have the upperparts rather lighter rufous and of a more cinnamon-colour than in Queensland birds; they are also rather smaller than the latter, with a wing-measurement of 9·2 ins. (as in the type of *M. assimilis*), as compared with 10–10·2 ins. in Queensland birds. The differences in size and colour are both variable characters, and in my opinion it is undesirable to separate the birds from Torres Straits Islands from *M. tumulus*, while it is very difficult to draw any line of demarcation between these and *M. duperreyi*.

Mr. Claude Grant says that "Duperrey's Megapode was
SER. X.—JUB.-SUPPL. 2. Y

found commonly from the coast up to the foot-hills, but was more plentiful on the coast. It forms mounds of leaves etc., generally selecting the foot of a tree as a base for its operations. It is rather shy and an exceedingly active runner. Its call is very similar to that of the Black Brush-Turkey, but in a different key.

"Chunggat, one of the Dyak collectors, obtained an egg from the oviduct of one of the specimens. It was chalky in appearance, of a cream- or stone-colour, and smaller than the egg of the Black Brush-Turkey."—*C. H. B. G.* This egg appears to be missing.

***Talegallus cuvieri*.**

Talegallus cuvieri Less. ; Ogilvie-Grant, Cat. xxii. p. 465 (1893); id. P. & P. p. 296 (1912); id. Ibis, 1913, p. 107; Roths. & Hartert, N. Z. xx. p. 476 (1913).

a-c. ♂. Iwaka River, 30th Jan.—13th Feb. 1911. [Nos. 961, 1030, 1041, *C. H. B. G.*]

♂. Iris pale yellow; bare skin on the sides of the head and neck medium olive-green; bill pale dull tomato-colour; legs and toes rich orange, nails pinkish flesh-colour. Wing 283 mm.

The fact that both this species of Brush-Turkey and the allied *T. fuscirostris* were found in the same district is of considerable interest. The common species of the country, *T. fuscirostris*, has a very wide coastal range, being also found in South-eastern New Guinea and extending along the north coast to the middle of Geelvink Bay. *T. cuvieri* is of western origin, being hitherto known from the Arfak Peninsula and the islands of Salawatti, Misol, and Gilolo. Its occurrence on the Iwaka River was quite unexpected, and no doubt the ranges of the two species overlap in the neighbourhood of the Mimika on the south and in the vicinity of Rubi on Geelvink Bay on the north. In both the plumage is black, but *T. cuvieri* is a larger bird than *T. fuscirostris*, and may be easily recognized by having the tibia feathered down to the tibio-tarsal joint, and the bill orange-red instead of sooty-brown.

A. S. Meek procured an adult and young male on the foot-hills above the Utakwa River. The locality has been wrongly recorded as Snow Mountains.

"This Brush-Turkey was only heard in the mountains around my highest camp on the Iwaka River. It is a very wary bird and extremely difficult to obtain. The call, which is usually heard in the very early morning, seldom during the rest of the day, is a loud 'kok, kok,' and the alarm-note is a grunt. The first time I heard the alarm-note I mistook it for the grunt of a pig, and was very surprised after careful stalking to find that the sound was made by a Brush-Turkey. We did not come across any of its mounds in the mountains."—C. H. B. G.

***Talegallus fuscirostris*.**

Talegallus fuscirostris Salvad. ; Ogilvie-Grant, Cat. xxii. p. 466 (1893) ; id. P. & P. p. 297 (1912) ; id. Ibis, 1913, p. 107 ; Roths. & Hartert, N. Z. xx. p. 476 (1913).

Talegallus cuvieri fuscirostris van Oort, p. 57 (1909).

a. ♂ imm. Wakatimi, Mimika River, 29th March, 1911. [No. 1287, C. H. B. G.]

b, c. ♂ et imm. Mimika River, 30 miles from the mouth, 25th Jan., & 22nd March, 1910. [Nos. 1010, 1124, G. C. S.]

d-h. ♂ ♀ et ♂ imm. Parimau, Mimika River, 4th Sept.—21st Dec. 1910. [Nos. 128, 299, 736, 991, C. H. B. G., & 1508, G. C. S.]

i. Pull. Tuaba River, 21st May, 1910. [No. 1162, G. C. S.]

k-m. ♂ ♀ ad. et imm. Wataikwa River, 22nd Sept., 14th & 16th Oct. 1910. [Nos. 1229, 1374, 1384, G. C. S.]

n-g. ♂ ♀. Canoe Camp, Setakwa River, 24th Oct.—13th Nov. 1912.

r-w. ♂ ♀ et ♂ pull. Launch Camp, Setakwa River, 6th Oct.—7th Nov. 1912, & 21st March, 1913.

♂ ♀. Iris brown ; bare skin on the sides of the head dark slate-colour ; bill brownish-black or dark brown tinged with buff on the lower mandible ; legs pale yellow or bright orange-yellow.

The total length measured in the flesh is, ♂ 580 mm., ♀ 570 mm.

This species has been regarded as a form of *T. cuvieri*, but, as has already been pointed out, it is structurally different and has the *terminal portion of the tibia naked*. Both the bill and the legs are proportionately much smaller than in *T. cuvieri*. Lastly, there are the marked differences in the colour of bill and the naked skin of the head.

All the specimens of *T. fuscirostris* in the present collection appear to be rather smaller than the specimens from South-east New Guinea listed in the British Museum Catalogue. The type-localities are given as South New Guinea and the Aru Islands, and Count Salvadori records the wing-measurement as 280–285 mm., which measurements agree with our two specimens from South-east New Guinea. All the birds procured between the Mimika and the Utakwa Rivers by the B. O. U. and Wollaston Expeditions have smaller dimensions.

Mimika to Utakwa Rivers :—

8 ♂. Wing 250–266 mm.; tail 135–151; tarsus 83–86.

6 ♀. „ 261–263 mm.; „ 145–147; „ 82–83.

S.E. New Guinea :—

2 ♂. Wing 280, 290 mm.; tail 169, 179; tarsus 98, 90.

Beyond the difference in size, there does not seem to be any character by which the smaller Mimika and Utakwa River birds may be separated from typical *T. fuscirostris*.

Quite young birds, when about one-third grown, resemble the adult in plumage, but the sides of the head and throat are covered with soft dark grey plumes.

When first hatched the nestling has the loose plumage of the crown and mantle black, irregularly mottled with sandy-rufous; the lower back, rump, and upper tail-coverts black, the plumes on the two last-named being much lengthened into a soft bunch; the cheeks and throat covered with brownish-white downy plumes, becoming yellowish-white on the chin; the chest, breast, and flank-feathers black edged with rufous-chestnut, and the abdomen almost entirely chestnut.



MENPES PRESS, WATFORD

CASUARIUS CLAUDII.

Mr. Claude Grant writes :—"The Black Brush-Turkey was plentiful everywhere except in the mangrove-swamps and on the mountains. The nesting-mounds of this species were common objects in the jungle. It is a somewhat shy bird and an active runner, seldom flying, but when once on the wing its flight is straight and swift. The 'call, which is repeated at intervals, is a loud 'chu, chu, chu, cha,' and may be heard everywhere, especially in the early morning."

Two eggs were brought in by the natives of Wakatimi, Mimika River, on the 4th March, 1911.

They are of the usual long oval shape and of a uniform brownish-buff colour with a pinkish tinge. They measure respectively 99×61 , 99×59 mm.

The egg of this species is new to the British Museum. Rosenberg had previously found eggs and described them.

**Æpypodius arfakianus*.

Æpypodius arfakianus (Salvad.); Ogilvie-Grant, Cat. xxii. p. 470 (1893); Roths. & Hartert, N. Z. xx. p. 477 (1913).

A young example of this Brush-Turkey was procured on the Utakwa River in September.

Family CASUARIIDÆ.

Casuarus claudii. (Pl. VIII.)

Casuarus claudii Ogilvie-Grant, Bull. B. O. C. xxix. p. 25 (1911); Rothschild, t. c. p. 52 (1911); Ogilvie-Grant, P. & P. p. 298 (1912); id. Ibis, 1913, p. 108; Rothschild, Bull. B. O. C. xxxiii. p. 35 (1913); Wollaston, t. c. p. 35 (1913); Roths. & Hartert, N. Z. xx. p. 476 (1913).

a. ♂ (mounted). Iwaka River, 25th Jan. 1911. [No. 918, C.H.B.G.] [*Type of the species.*]

The type-example of this fine species was discovered by Mr. Claude Grant on the Iwaka River during the B. O. U. Expedition, and has been named in honour of him. The description is as follows :—

Adult male. Most nearly allied to *C. papuanus* Schleg. and *C. edwardsi* Oustal., but at once distinguished from both by having the occiput and sides of the face entirely black like

the bill and casque. Between the gape and the ear a patch of deep plum-colour; upper half of the back of the neck electric-blue, shading into violet-blue on the sides and fore-part of the neck, including the throat; lower half of the back of the neck orange-chrome, this colour extending down the upper margin of a bare magenta-coloured area situated on each side of the feathered part of the neck. Iris rich brown; legs and toes olive-brown, lighter olive on the front of the tarsi and joints.

The species stands about 3 feet 2 inches in height.

Culmen 59 mm.; tarsus 255; middle toe and claw 165.

"This dwarf species of Cassowary was met with on five or six occasions in the mountains and, though only one was shot, was by no means wild. It was equally at home on the rough steep sides of the mountains and in the rock-strewn beds of the streams."—*C. H. B. G.*

The species was also procured by A. S. Meek on the Utakwa River at an altitude of 3000 ft., and a head and neck sent by him are preserved in the Tring Museum. Mr. Rothschild also possesses a complete adult specimen of *C. claudii*, which was imported some years ago as a young bird, and recently died in captivity.

Mr. Wollaston did not obtain the species on the Utakwa, but the tracks of a Cassowary seen at an elevation of 2000 ft. led him to believe that it was of this species.

The specimen figured is the ♂ type of the species.

Casuarinus sclateri.

Casuarinus c. sclateri Salvad.; Rothschild, Trans. Zool. Soc. xv. p. 118, fig. 1 (1898); van Oort, p. 51 (1909); Roths. & Hartert, N. Z. xx. p. 476 (1913).

Casuarinus sclateri Ogilvie-Grant, P. & P. p. 297 (1912); id. Ibis, 1913, p. 108.

a. ♂ (head only). Parimàu, Mimika River, Aug. 1910. [*W. G.*]

b. Head only. Wataikwa River, Dec. 1910. [*G. C. S.*]

c. ♀. Wataikwa River, 15th Oct. 1910. [No. 1378, *G. C. S.*]

d. ♀. Canoe Camp, Setakwa River, Nov. 1912. [C. B. K.]

e. ♀. Launch Camp, Setakwa River, 5th Oct. 1912. [C. B. K. With a water-colour drawing of the head and neck.]

f. ♂. Launch Camp, Setakwa River, 13th March, 1913. [C. B. K.]

In the adult female the casque is much larger than in the adult male.

Mr. Kloss records the colours of the soft-parts of specimen "e" as follows:—"Casque dark umber-brown shading into green at the base and black in front; bill black, tip paler; lores black; wattles entirely pink; on the base of the neck an orange-scarlet area four inches at the widest part, supra-orbital and occipital skin pale bright turquoise, pre-occipital area and base of the mandible black, a pale yellow patch on the lower angle of lower mandible; extensions of the wattle up the neck, mottled with deep pink and white; warts on the base of neck dirty bluish-purple; gular skin and the neck slaty-blue, blotched with black; nape turquoise and deep cobalt; nuchal patch plum-coloured and orange-red above with bluish V-shaped markings, orange and orange-red below, slightly mottled with purplish towards the base. Iris hazel; legs greyish-black, darker behind; toes and claws horn-colour."—C. B. K.

"Legs horn-brown tinged with olive, shading into buff at the tibio-tarsal joint."—C. H. B. G.

Mr. Walter Goodfellow writes:—"The natives have distinct names for the male and female birds, and, judging from the quantities of feathers in their possession, must often succeed in catching them. Eggs and newly hatched chicks were brought in during January and February. On one occasion at Parimau some Cassowaries' eggs must have been kept by the natives for a few days before they hatched, for young ones were brought to us which had evidently just emerged from the shells. Cassowaries were seen at various times by the different members of the Expedition searching for food in the pools and shallow waters of the river-beds,

and during the cross-country marches they sometimes dashed across our trail, but afforded scarcely a momentary glimpse. In July, at Parimàu, one was often heard calling during the night quite close to our camp, and, judging by the very large tracks it left in the soft mud, I should say that it was a female. A couple of hours after daybreak, on one of the following mornings, a male bird was observed on the bank of the river opposite our camp and within a dozen yards of the village. It was trying to cross the swollen waters to our side; one of the soldiers fired at it, but with no result. The next morning at the same hour the bird appeared again at the same spot. This time a Gurkha succeeded in wounding it, and, after crossing the river and following it up in the jungle, he at length secured it."

"This appears to be the commonest Cassowary on the plains and extends on to the lower slopes of the mountains. It was seen singly both in the jungle and in the open stony beds of the rivers, but was by no means easy to approach. Its cry might frequently be heard close to our camps."—*C. H. B. G.*

Two eggs were taken by a Gurkha from a nest of three at Parimàu, Mimika River, 3rd Dec. 1910. They measure respectively 136×95 and 140×95 mm.

Two eggs were brought in by a native. Parimàu, 23rd Nov. 1910. They measure respectively 133×93 and 135×94 mm.

One egg was taken from the body of a female. Canoe Camp, Setakwa River, Dec. 1912. It measures 146×93 mm.

One egg was brought in by a native. Canoe Camp, Setakwa River. It measures 140×94 mm.

Casuarius intensus.

Casuarius c. intensus Rothschild, Trans. Zool. Soc. xv. p. 121, pl. xxvii. (1898).

Casuarius intensus Goodfellow, Bull. B. O. C. xxix. p. 4 (1911).

This species was obtained by the Expedition, but not preserved. Mr. Walter Goodfellow writes:—"Two or three

days after we landed at the mouth of the Mimika River the Gurkhas brought in the first Cassowary. It was impossible to skin it, but I made a careful note of the colours of its soft-parts. Since looking at Mr. Rothschild's plate of *Casuaris intensus*, I have no hesitation in attributing it to that species. The casque was erect (not turned over, as in most of the specimens of *C. sclateri*, of which we subsequently shot many) and finely shaped. The wattles were only partially divided and of a light blue colour with a few pinkish marks on the underside. When I was leaving the country eight months later, one of the Gurkhas brought in the head of another specimen identical with the first. So far as I know, this species was never met with on the Upper Mimika, whereas *C. sclateri* was common to both parts and tolerably numerous."





INDEX.

- Acanthochoera fusca*, 60.
Accipiter cirrhocephalus, 264.
 — *hiogaster etorques*, 260.
 — *melanocephalus*, 259.
 — — *schistacinus*, 259.
 — *nisus*, 264.
 — *papuanus*, 263.
 — *poliocephalus*, 261.
Ægialitis dubius, 283.
 — *jerdoni*, 283.
 — *geoffroyi*, 282.
 — *mongolus*, 282.
Ægotheles salvadorii, 201.
 — *wallacei*, 199.
Æluræus buccoides, 35.
 — — *oorti*, 36.
 — *melanotis*, 33.
 — — *melanocephalus*, 33.
 — *stonii*, 35.
Æypodius arfakianus, 325.
Æthomyias spilodera, 170.
 — — *guttata*, 170.
Alcyon azurea lessoni, 204.
 — *lessoni*, 204.
 — *pulehra*, 205.
 — *pusilla*, 205.
 — *richardsi aolæ*, 206.
 — — *bougainvillei*, 207.
Amalociebla brevicauda, 115.
Amaurornis moluccana, 291.
Amblyornis inornatus musgravii, 30.
 — *macgregoriae*, 30.
 — *musgravii*, 30.
Anas querquedula, 275.
Androphilus viridis, 115.
Anseranas semipalmata, 273.
Anthus wollastoni, 47.
Anurophasis monorthonyx, 318.
Aprosmictus amboinensis dorsalis, 251.
 — *callopterus*, 249.
 — — *wilhelminæ*, 249.
 — *dorsalis*, 251.
 — *wilhelminæ*, 249.
Arachnothera iliolophus, 58.
 — *polioptera*, 57.
Arses aruensis, 141.
 — *telescopthalmus*, 141.
 — — *aruensis*, 141.
 — — *harterti*, 141.
Artamides caruleo-griseus, 131.
Artamus leucogaster, 106.
 — *leucorhynchus leucopygialis*, 106.
 — *maximus*, 107.
Astrapia splendidissima, 14.
Astur cirrhocephalus papuanus, 263.
 — *etorques*, 260.
 — *melanocephalus*, 258.
 — — *schistacinus*, 258.
 — *palumbarius*, 264.
 — *poliocephalus*, 261.
 — *rufitorques etorques*, 260.
 — *torquatus*, 263.
Baza reinwardti, 268.
Baza reinwardti steno-
zona, 269.
 — *stenozone*, 271.
 — *subcristata*, 271.
 — — *megala*, 269.
 — — *reinwardti*, 268.
Brachypteryx brunneiventris, 113.
Butorides javanica stagnatilis, 277.
 — *stagnatilis*, 277.
Cacatua galeritus triton, 242.
 — *triton*, 242.
Cacomantis assimilis, 184.
 — *insperatus*, 184.
Calliechthrus leucolophus, 180.
Calornis metallica, 40.
 — *mystacea*, 40.
Campephaga aurulenta, 120.
Campochæra sloetii, 120.
 — — *flaviceps*, 120.
Caprimulgus macurus, 196.
Carpophaga albicularis, 304.
 — *chalconota*, 302.
 — *muelleri*, 302.
 — *pinon*, 303.
 — — *rubiensis*, 303.
 — *rufigaster*, 301.
 — *rufiventris*, 301.
 — *zoæa*, 301.
Casuarius casuarius intensus, 328.
 — — *sclateri*, 326.
 — *claudii*, 325.
 — *intensus*, 328.
 — *sclateri*, 326.

- Centropus bernsteini*, 189.
 — *menebiki*, 188.
 — *menebeki*, 188.
 — *nigricans*, 189.
 — *phasianus nigricans*, 189.
Ceyx solitaria, 207.
Chætorhynchus papuensis, 44.
Chætura caudacuta, 195.
 — *novæ-guinææ*, 194.
Chalcococyx meyeri, 185.
 — *pœcilurus*, 185.
Chalcophaps stephani, 310.
Chalcopsittacus chloropterus, 222.
 — *scintillatus*, 220.
 — *chloropterus*, 222.
Charadrius dominicus, 281.
 — *fulvus*, 281.
 — *dubius*, 283.
Charmosyna atrata, 234.
 — *josephineæ*, 233.
 — *stellæ goliathina*, 232.
Charmosynopsis multi-striata, 231.
 — *pulchella*, 230.
Chelidon javanica, 176.
 — *rustica gutturalis*, 175.
Chibia assimilis, 42.
Chlamydodera lauterbachii, 33.
Chrysococyx meyeri, 185.
Cicinnurus regius, 17.
 — *claudii*, 16.
 — *coccineifrons*, 17.
Cinnyris aspasia, 79.
 — *frenata*, 80.
 — *jugularis*, 80.
Clytoceyx rex imperator, 213.
Clytomias insignis oorti, 160.
Cnemophilus mariæ, 30.
Collocalia esculenta maxima, 194.
 — *fuciphaga*, 190.
 — *hirundinacea*, 191.
 — *vanikorensis*, 190.
 — *hirundinacea*, 191.
Collocalia hirundinacea excelsa, 192.
 — *nitens*, 193.
 — *whiteheadi*, 190.
Columba albigularis, 304.
Conopophila albogularis, 54.
Coracina œruleogrisea, 131.
 — *longicauda*, 129.
 — *papuensis papuensis*, 128.
Corvus orru, 2.
Cosmeteira minima, 49.
Cracticus cassicus, 96.
 — *quoyi*, 96.
Craspedophora magnifica, 10.
Crateroscelis murinus, 113.
 — *rufobrunnea*, 114.
Cuculus intermedius, 181.
 — *optatus*, 181.
Cuncuma leucogaster, 267.
Cyclopsitta desmarestii cervicalis, 237.
 — *melanogenia fuscifrons*, 239.
Cyclopsittacus cervicalis, 237.
 — *diopthalmus*, 238.
 — *coccineifrons*, 238.
 — *fuscifrons*, 239.
 — *godmani*, 237.
 — *melanogenys*, 239.
 — *fuscifrons*, 239.
Cyrtostomus frenatus, 80.
Dacelo intermedia, 213.
 — *leachii intermedia*, 213.
Daphænositta miranda frontalis, 86.
Dasyptilus pesqueti, 245.
Dendrocygna guttata, 273.
 — *guttulata*, 273.
Dicæum diversum, 81.
 — *geelvinkianum diversum*, 81.
Dicruropsis carbonaria, 42.
Dicrurus assimilis, 42.
Dicrurus bracteatus assimilis, 42.
 — *carbonarius*, 42.
Diphyllodes chrysoptera, 22.
 — *septentrionalis*, 25.
 — *hunsteini*, 25.
 — *jobiensis*, 22.
 — *magnificus*, 22.
 — *rothschildi*, 24.
 — *seleucides*, 22.
 — *speciosa*, 22.
 — *var. chrysopterus*, 22.
 — *hunsteini*, 25.
 — *xanthoptera*, 25.
Dupetor flavicollis gouldi, 279.
 — *gouldi*, 279.
Eeclctus pectoralis, 246.
Edoliisoma amboinense aruensis, 122.
 — *mülleri*, 122.
 — *aruense*, 122.
 — *incertum*, 126.
 — *melas*, 121.
 — *meeki*, 121.
 — *tommasonis*, 122.
 — *meyeri sharpei*, 124.
 — *montanum*, 127.
 — *minus*, 127.
 — *nigrum*, 121.
 — *plumbea*, 122.
 — *poliopse*, 125.
 — *schisticeps*, 125.
 — *poliopse*, 125.
 — *tenuirostre*, 122.
 — *utakwensis*, 127.
Egretta alba timoriensis, 276.
Entomophila albogularis, 54.
Entomyia cyanotis griseigularis, 77.
Eos fuscata, 222.
Erolia maculata acuminata, 285.
Esacus magnirostris, 279.
Eudynamis cyanocephala, 185.
 — *minima*, 186.
 — *orientalis rufiventer*, 186.
 — *rufiventer*, 185.

- Eugerygone rubra*, 172.
Eulacestoma nigropectus, 88.
Eupetes cærulescens nigricrissus, 116.
 — *castanonotus saturatus*, 118.
 — *leucostictus loræ*, 118.
 — *nigricrissus*, 116.
Eurostopodus astrolabæ, 197.
Eurystomus australis, 203.
 — *crassirostris*, 203.
 — *orientalis australis*, 203.
Eutolmaëtus weiskei, 266.
Eutrygon leucopareia, 315.
 — *terrestris*, 315.
 — *leucopareia*, 315.

Falcinellus striatus atratus, 13.
Flammea flammea novæ-hollandiæ, 258.

Gallinago megala, 286.
Gelochelidon anglica, 286.
 — *nilotica*, 286.
Geocichla papuensis, 112.
Geoffroyus aruensis, 247.
 — *personatus aruensis*, 247.
 — *pucherani*, 248.
 — *pucherani*, 248.
 — *simplex*, 248.
Gerygone chrysogaster, 167.
 — *cinerea*, 170.
 — *conspicillata subsp.*, 168.
 — *palpebrosa*, 168.
 — (*Eugerygone*) *rubra*, 172.
Gliciphila modesta, 53.
 — *ramsayi*, 53.
 — *subfasciata*, 53.
Glossopsittacus goldiei, 229.
Glottis littorea, 285.
 — *nebularius*, 285.

Glycichæra fallax, 54.
Goura coronata, 318.
 — *sclateri*, 316.
Grallina bruijii, 106.
Graucalus cæruleo-griseus, 131.
 — *hypoleucus stalkeri*, 123.
 — *lineatus*, 129.
 — *longicauda*, 127.
 — *melanops*, 128.
 — *papuensis*, 128.
 — *meekiana*, 123.
 — *strenua*, 130.
 — *subalaris*, 129.
Gymnocorax senex, 2.
Gymnocrex plumbeiventris, 288.
Gymnophaps albertisii, 305.

Halcyon macleayi, 215.
 — *distinguendus*, 215.
 — *publa*, 215.
 — *nigrocyanus*, 216.
 — *sanctus*, 218.
 — *sordidus*, 217.
 — *melvillensis*, 217.
Haliaëtus leucogaster, 267.
Haliastur girrenera, 267.
 — *indus girrenera*, 267.
Harpyopsis novæ-guinææ, 265.
Henicopernis longicauda, 268.
Henicophaps albifrons, 311.
 — *schlegeli*, 311.
Hermotimia aspasia, 79.
Herodias alba timoriensis, 276.
 — *timoriensis*, 276.
Heteromyias armiti, 160.
Heteropygia acuminata, 285.
Hieracidea berigora novæguinææ, 272.
Hieraëtus weiskei, 266.
Himantopus leucocephalus, 283.
Hirundo javanica, 176.
 — *rustica gutturalis*, 175.

Hydralector gallinaceus, 280.
 — *rothschildi*, 280.
Hydrochelidon hybrida, 286.
Hypocharmosyna placensis, 230.
 — *wilhelminæ*, 229.
Hypotænidia philippensis, 287.

Ibis molucca, 275.
Ieracidea berigora novæ-guinææ, 272.
Ifrita coronata, 115.

Lalage karu, 119.
 — *microrhyncha*, 118.
 — *polygrammica*, 119.
Lamprocorax metallica, 40.
 — *mystacea*, 41.
Limnites minutus ruficollis, 285.
 — *ruficollis*, 285.
Lobaparadisea sericea, 28.
Lobivanellus miles, 282.
Lophorina superba femina, 27.
 — *minor*, 27.
Loria loræ, 30.
 — *maræ*, 30.
Loriculus aurantiifrons, 254.
 — *batavorum*, 254.
 — *meeki*, 254.
Lorius erythrothorax, 224.
 — *lory erythrothorax*, 224.
 — *salvadorii*, 226.
Lyncornis papuensis, 197.

Machærorhynchus flaviventer xanthogenys, 143.
 — *nigrippectus*, 144.
 — *harterti*, 144.
 — *saturatus*, 144.
 — *xanthogenys*, 143.
Macropteryx mystacea, 195.

- Macropygia amboinensis cinereiceps*, 307.
 ——— *doreya*, 309.
 ——— *cinereiceps*, 307.
 ——— *doreya*, 309.
 ——— *griseinucha*, 307.
 ——— *nigrirostris*, 308.
Malurus alboscapulatus, 107.
 ——— *naimii*, 109.
 ——— *lorentzi*, 107.
Manucodia altera, 6.
 ——— *atra*, 6.
 ——— *chalybata*, 9.
 ——— *orientalis*, 9.
 ——— *jobiensis*, 8.
 ——— *orientalis*, 9.
Megacrex inepta, 288.
Megaloprepia magnifica puella, 300.
 ——— *puella*, 300.
Megapodius affinis, 319.
 ——— *brunneiventris*, 319.
 ——— *duperreyi*, 319.
 ——— *melvillensis*, 321.
 ——— *forsteni*, 319.
Melanocharis chloroptera, 84.
 ——— *nigra chloroptera*, 84.
 ——— *striativentris*, 85.
Melanopyrrhus anais orientalis, 37.
 ——— *orientalis robertsoni*, 37.
 ——— *robertsoni*, 37.
Melidectes torquatus, 59.
Melidora macrorrhina, 212.
Melilestes chloreus, 58.
 ——— *iliolophus*, 58.
 ——— *megarhynchus*, 55.
 ——— *novæguineæ flaviventris*, 57.
 ——— *poliopterus*, 57.
Melipotes fumigatus goliathi, 59.
 ——— *gymnops goliathi*, 59.
Melirrhophetes batesi, 61.
 ——— *belfordii*, 61.
 ——— *griseirostris*, 62.
 ——— *fuscus*, 60.
 ——— *nouhuysi*, 60.
 ——— *ochromelas batesi*, 61.
Melopitta gigantea, 176.
 ——— *lugubris rostrata*, 177.
Merops ornatus, 202.
Microdynamis parva, 186.
Microeca flavigaster, 173.
 ——— *flaviventris*, 173.
 ——— *flavovirescens*, 172.
 ——— *griseiceps*, 174.
 ——— *bartoni*, 174.
 ——— *papuaana*, 161.
Microglossus aterrimus, 240.
 ——— *stenolophus*, 240.
Mimeta striata, 45.
Mino dumonti, 36.
 ——— *robertsoni*, 37.
Monachella mülleriana, 166.
 ——— *saxicolina*, 166.
Monarcha sp. inc., 134.
 ——— *axillaris*, 140.
 ——— *chalybeccephalus*, 139.
 ——— *chrysomelas*, 134.
 ——— *aruensis*, 133.
 ——— *aurantiacus*, 134.
 ——— *kordensis*, 134.
 ——— *melanonotus*, 134.
 ——— *guttula*, 134.
 ——— *menadensis*, 136.
 ——— *periophthalmica*, 132.
 ——— *rubiensis*, 138.
Motacilla boarula melanope, 47.
 ——— *flava*, 46.
 ——— *simillima*, 46.
 ——— *melanope*, 47.
Munia tristissima, 46.
Myiagra sp., 146.
 ——— *latirostris*, 145.
 ——— *mimikæ*, 145.
 ——— *mimikæ*, 145.
 ——— *rubecula*, 145.
Myiolestes bimaculata, 113.
 ——— *pulverulentus*, 162.
Myristicivora bicolor spilorrhoea, 304.
 ——— *spilorrhoea*, 304.
Myzomela cruentata, 48.
 ——— *eques*, 48.
 ——— *nymani*, 49.
 ——— *erythrocephala infusca*, 50.
Myzomela infusca, 50.
 ——— *nigrita*, 50.
 ——— *obscura*, 51.
 ——— *apsleyi*, 52.
 ——— *fumata*, 52.
 ——— *rosenbergi*, 51.
Nasiterna bruijnii, 244.
 ——— *keiensis*, 243.
 ——— *viridipectus*, 243.
 ——— *pygmæa viridipectus*, 243.
Neopsittacus muschenbroeki, 235.
 ——— *alpinus*, 236.
Neositta albifrons, 86.
Nettopus pulchellus, 273.
Ninox connivens assimilis, 256.
 ——— *goldiei*, 257.
 ——— *rufistrigata assimilis*, 256.
 ——— *terricolor*, 257.
 ——— *theomacha*, 256.
Notophoxys picata, 276.
Numenius arquata cyanopus, 283.
 ——— *cyanopus*, 283.
 ——— *phæopus variegatus*, 284.
Nycticorax caledonicus, 277.
Ochthodromus geoffroyi, 282.
 ——— *mongolus*, 282.
Oedistoma pygmæum, 55.
Opopsitta (Cyclopsittacus) blythi godmani, 237.
Oreocharis arfaki, 86.
Oreopsittacus arfaki, 234.
 ——— *intermedius*, 235.
 ——— *major*, 234.
 ——— *frontalis*, 234.
Oreornis chrysogenys, 79.
Oriolus flavocinctus, 45.
 ——— *mülleri*, 45.
 ——— *sagittata magnirostris*, 45.
 ——— *striatus*, 45.
Orthorhampbus magnirostris, 279.
Otidiphaps nobilis, 315.

Pachycare flavogrisea, 87.
 ——— subaurantia,
 87.
Pachycephala aurea, 89.
 ——— dorsalis, 94.
 ——— gamblei, 93.
 ——— griseiceps, 92.
 ——— hattamensis, 93.
 ——— leucostigma, 95.
 ——— poliosoma, 94.
 ——— ——— approximans,
 94.
 ——— rufinucha gamblei,
 93.
 ——— schlegeli, 90.
 ——— ——— obscurior, 90.
 ——— soror, 88.
 ——— bartoni, 89.
 ——— klossi, 88.
 ——— sororcula, 91.
 ——— tenebrosa, 95.
Paradigalla breviceauda,
 25.
 ——— intermedia, 26.
Paradisæa apoda novæ-
guineæ, 14.
 ——— magnifica, 22.
 ——— minor, 16.
 ——— novæguineæ, 14.
 ——— speciosa, 22.
Paramythia montium
olivaceum, 41.
 ——— olivaceum, 41.
Parotia carolæ, 26.
 ——— ——— berlepschi, 26.
 ——— ——— meeki, 26.
Peltops blainvillei, 132.
 ——— minor, 132.
Petrochelidon nigricans,
 175.
Phalacrocorax melano-
leucus, 272.
 ——— sulcirostris, 272.
Philemon novæguineæ,
 77.
 ——— ——— aruensis, 77.
 ——— ——— brevipennis,
 77.
 ——— ——— subtuberosus,
 78.
Phlogœnas beccarii, 314.
 ——— helviventris, 314.
 ——— margaritæ, 314.
 ——— rufigula, 312.
 ——— ——— helviventris,
 314.
Phonygama gouldi, 6.
 ——— hunsteini, 6.
 ——— jamesi, 4.
Phonygama purpureo-
violacea, 5.

Phonygammus kerau-
dreni, 4.
Piezorhynchus alecto,
 139.
 ——— aruensis, 133.
 ——— axillaris, 140.
 ——— dichrous, 136.
 ——— guttulatus, 134.
 ——— rubiensis, 138.
Pinarolestes megarhyn-
chus, 98.
Pitohui aruensis nigri-
pectus, 101.
 ——— cirrhocephalus de-
 cipiens, 103.
 ——— cristatus, 103.
 ——— dichrous, 99.
 ——— ——— monticola, 99.
 ——— ferrugineus, 104.
 ——— incertus, 105.
 ——— kirrhocephalus de-
 cipiens, 103.
 ——— meeki, 105.
Pitta atricapilla, 177.
 ——— mackloti, 179.
 ——— novæguineæ, 177.
Podargus ocellatus, 199.
 ——— papuensis, 198.
Podiceps fluviatilis novæ-
hollandiæ, 287.
 ——— novæhollandiæ,
 287.
Pœcilodryas æthiops,
 113.
 ——— albonotata grisei-
 ventris, 165.
 ——— bimaculata, 165.
 ——— brachyura dumasi,
 163.
 ——— caniceps, 90.
 ——— ——— pectoralis, 91.
 ——— cyana, 164.
 ——— ——— subcyanea,
 164.
 ——— hypoleuca, 163.
 ——— leucops nigro-
 orbitalis, 161.
 ——— papuana, 161.
 ——— pulverulenta, 162.
 ——— quadrimaculatus,
 112.
 ——— sigillata, 113.
 ——— subcyanea, 164.
Pomareopsis bruijni,
 106.
Pomatorhinus isidori,
 116.
Pristorhamphus versteri
 meeki, 83.
Pseudogerygone sp. inc.,
 170.

Pseudogerygone chryso-
gaster, 167.
 ——— cinerea, 170.
 ——— conspicillata mi-
 mikæ, 168.
 ——— palpebrosa, 168.
Pseudorectes ferrugineus,
 104.
Psittacella brehmi, 251.
 ——— ——— pallida, 251.
 ——— lorentzi, 251.
 ——— modesta, 252.
 ——— ——— collaris, 252.
Psittacus goliath, 240.
Pteridophora alberti,
 25.
Ptilonopus aurantiifrons,
 295.
 ——— bellus, 299.
 ——— coronulatus, 293.
 ——— gestroi, 296.
 ——— ——— kaporensis,
 297.
 ——— humeralis, 294.
 ——— iozonus humeralis,
 294.
 ——— nanus, 300.
 ——— perlatus zonurus,
 297.
 ——— pulchellus, 292.
 ——— rivoli bellus, 299.
 ——— superbus, 291.
 ——— wallacei, 296.
Ptilopus aurantiifrons,
 295.
 ——— bellus, 299.
 ——— coronulatus, 293.
 ——— gestroi, 296.
 ——— humeralis, 294.
 ——— nanus, 300.
 ——— pulchellus, 292.
 ——— superbus, 291.
 ——— wallacei, 296.
 ——— zonurus, 297.
Ptilorhis magnificus, 10.
Ptilotis albonotata, 64.
 ——— ——— montana, 65.
 ——— ——— analoga, 63.
 ——— ——— gracilis, 65.
 ——— ——— orientalis, 68,
 69.
 ——— ——— aruensis, 66.
 ——— ——— chrysotis filigera,
 72.
 ——— ——— saturator, 72.
 ——— cinerea, 74.
 ——— ——— marmorata,
 74.
 ——— ——— diops, 69.
 ——— erythropleura, 75.
 ——— ——— lorentzi, 76.

- Ptilotis flavirictus*, 63,
 66.
 — *fumata*, 51.
 — *gracilis*, 65.
 — *ixoides*, 71.
 — *longirostris*, 64.
 — *marmorata*, 73.
 — *megalarhynchus*,
 55.
 — *megarhynchus*, 55.
 — *mimikæ*, 67.
 — *notata mimikæ*, 67.
 — *orientalis*, 69.
 — *orientalis*, 69.
 — *plumbea*, 75.
 — *polygramma*, 76.
 — *præcipua lorentzi*,
 76.
 — *nigritergum*,
 76.
 — *salvadorii utak-*
wensis, 71.
 — *similis*, 63.
 — *simplex*, 72.
 — *versicolor*, 77.
Ptistes erythropterus,
 249.
 — *coccineop-*
terus, 249.
Pycnopygius stictocephalus, 79.

Querquedula circia, 275.
 — *discors*, 275.
 — *querquedula*, 275.

Rallcula klossi, 290.
Rallina tricolor, 289.
Reinwardtenas rein-
wardti, 309.
 — *griseotincta*,
 309.
Rhamphocharis crassi-
rostris, 85.
Rhectes cristatus, 103.
 — *decipiens*, 103.
 — *dichrous*, 99.
 — *phæocephalus*, 102.
Rhipidura albolimbata,
 154.
 — *lorentzi*, 154.
 — *atra*, 146.
 — *auricularis*, 154.
 — *brachyrhyncha*,
 146.
 — *cinnamomea*,
 147.
 — *concinna*, 155.
 — *fallax*, 140.
 — *fumosa*, 150.

Rhipidura harterti, 149.
 — *hyperythra*, 153.
 — *mülleri*, 153.
 — *leucothorax*, 151.
 — *maculipectus*, 151.
 — *meyeri*, 146.
 — *rufidorsa*, 147.
 — *setosa*, 152.
 — *gularis*, 152.
 — *streptophora*, 148.
 — *threnothorax*, 149.
 — *tricolor*, 155.
Rhyacophilus glareola,
 284.
Rbynchænas schlegeli,
 311.
Rhytidoceros plicatus,
 201.

Sauromarptis gaudi-
chaud, 214.
 — *kubaryi*, 214.
Saxicola quadrimacu-
latus, 112.
Seythrops novæ-hol-
landiæ, 189.
Seleucides ignota, 11.
 — *niger*, 11.
 — *nigricans*, 11.
Sericornis arfakiana
nouhuysi, 112.
 — *fulvipes*, 114.
 — *meeki*, 112.
 — *olivacea*, 111.
 — *perspicillata*, 111.
 — *pusilla*, 111.
Solenoglossus aterrimus,
 240.
 — *alecto*, 241.
 — *goliath*, 240.
 — *macgillivrayi*,
 241.
Sterna bergii, 286.
 — *dougalli*, 287.
 — *sinensis*, 287.
Stiltia isabella, 281.
Strix arfaki, 258.
 — *novæ-hollandiæ*,
 258.
Syma megarhyncha, 211
 — *torotoro*, 208.
 — *meeki*, 208.
 — *tentelare*, 208.
 — *weiskei*, 211.

Tadorna radjah, 274.
Talegallus cuvieri, 322.
 — *fuscirostris*,
 323.
 — *fuscirostris*, 323.

Tanysiptera sylvia, 219.
 — *sylvia salvadori-*
ana, 219.
Terekia cinerea, 285.
Tigrisoma heliosylus, 278.
Timeliopsis flavigula
meyeri, 79.
Todopsis bonapartii, 159.
 — *coronata*, 157.
 — *cycnocephalus*
bonapartii, 159.
 — *dohertyi*, 159.
 — *wallacii*, 157.
Totanus glareola, 284.
 — *hypoleucus*, 284.
 — *nebularius*, 285.
Tregellasia leucops nigro-
orbitalis, 161.
 — *papuanus*, 161.
Trichoglossus coccinei-
frons, 228.
 — *cyanogrammus*, 227.
 — *nigrogularis*,
 229.
 — *hæmatodus cyano-*
grammus, 227.
 — *nigrogularis*,
 229.
 — *nigrogularis*, 229.
Tringa acuminata, 285.
 — *hypoleuca*, 284.
 — *minuta ruficollis*,
 285.
Tringoides hypoleucus,
 284.
Tropidorhynchus novæ-
guinææ, 77.
Trugon terrestris, 315.
 — *leucopareia*,
 315.
Turdus (Geocichla) papu-
ensis, 112.
Turnix maculosus, 318.

Uroloncha tristissima, 46.
Urospizias etorques, 260.
 — *melanochlamys*,
 258.
 — *poliocephalus*, 261.
 — *spilothorax*, 261.

Xanthomelus ardens, 31.
 — *aureus ardens*, 31.
Xanthotis chlorolæma, 70.
 — *melanolæma*, 71.

Zonerodius heliosylus,
 278.
Zosterops chrysolæma, 85.
 — *fuscicapilla*, 85.